



SERVICE MANUAL



X MULTI SERIES

- 4-WAY CASSETTE INDOOR UNIT
- CONVERTIBLE INDOOR UNIT
- CONSOLE INDOOR UNIT
- DUCT INDOOR UNIT
- WALL MOUNTED INDOOR UNIT
- OUTDOOR UNIT

Haier Commercial Air Conditioner

Version: 200708

CONTENT

1.General information	3
1.1 X Multi series line up	3
1.2 Operation temperature range	3
1.3 Product features	4
2.Specifications	6
3.Dimension	17
4.Pipe and wiring installation	21
4.1 Combination of indoor and outdoor units	21
4.2 Wiring connection	31
4.3 Limitation on the installation	34
4.4 Outdoor unit installation	37
4.5 Cassette type installation	44
4.6 Convertible type installation	51
4.7 Duct type installation	64
4.8 Console type installation	74
4.9 Wall mounted type installation	81
5.PCB photo,wiring diagram and function description	85
5.1 Outdoor unit	85
5.1.1 Outdoor PCB photo	85
5.1.2 Outdoor wiring diagram	86
5.1.3 PCB function description	90
5.2 Indoor unit	90
5.2.1 Cassette and duct type PCB photo	90
5.2.2 Cassette and duct type wiring diagram	98
5.2.3 Convertible type PCB photo	100
5.2.4 Convertible type wiring diagram	101
5.2.5 Converible type PCB function description	102
5.2.6 Console type PCB	108
5.2.7 Console type wiring diagram	109
5.2.8 Console type PCB function description	110
5.2.9 Wall mounted type PCB photo	111
5.2.10 Wall mounted type wiring diagram	112
5.2.11 Wall mounted type PCB function description	114
6.Diagnostic code	117
6.1.1 Outdoor unit diagnostic code	117
6.1.2 Cassette type and convertible type diagnostic code	118
6.1.3 Duct type diagnostic code	119
6.1.4 Console type diagnostic code	121
6.1.5 Wall mounted type diagnostic code	122
6.2 Trouble shooting	123
7.Assistant software	126
8.Performance curves	127
9. Indoor air velocity and temperature distribution	133
9.1 AB092-182XCERA	133
9.2 AC142-182XCERA	135
9.3 AF092-122XCERA	139
9.4 Wall mounted type	141
10. Air flow and static pressure chart	142

1. General information

1.1 X-Multi series line up

				
AB092XCERA AB122XCERA AB142XCERA AB182XCERA	AC142XCERA AC182XCERA	AD092XLERA AD122XLERA AD142XLERA AD182XLERA	AF092XCERA AF122XCERA	AS072XVERA AS092XVERA AS122XVERA AS182XVERA

		
AU182XFERA AU222XFERA	AU252XGERA	AU282XHERA AU342XHERA AU362XHERA

1.3 Operation temperature range

inverter single unit, super low ambient temp. cooling

			Rated	Maximum	Minimum
Cooling	Indoor	DB °C	27	32	15
		WB °C	19	23	14
	outdoor	DB °C	35	43	-5
		WB °C	24	26	6
Heating	Indoor	DB °C	20	27	10
		WB °C	14.5	--	--
	outdoor	DB °C	7	23	-10
		WB °C	6	18	--

1.3 Product features

High efficient, universal outdoor unit

The outdoor unit can match with cassette type, duct type, convertible type, console type and wall mounted type indoor unit. Outdoor unit can match with multiple indoor units. Even when you have already installed the air conditioner, if you want to add or reduce one unit, go ahead freely as long as your operation complies with our design. Greatly convenient for designer and installer.

Total indoor load can be up to 135% than the standard match

The total capacity of all indoor units can be 135% more than the nominal cooling capacity, but the total indoor cooling capacity will not be increased.

Newly designed V- appearance indoor unit

The wall mounted type indoor unit adopts the newly designed V appearance, more fashion, more beautiful. The unit is designed with the health airflow and sterilize function, which will make the air more healthy. Also the air blow direction can be set as step or stepless control, much convenient to control.

Newly designed guarding plate of valve

In order to protect the valve against the dust, the rain or the snow, etc. we add a guarding plate to the valve.



Adopt the much friendlier refrigerant R410a

The air conditioner system adopts the greatly friendly refrigerant R410a, which is protective for the ozone layer and is good to avoid the earth getting warmer. Benefit for the environment.

Adopt the advanced DC inverter technology

The system adopts the advanced DC inverter technology, which can consume less power energy to realize the equal efficiency, saving money for you.

With air inlet filter, enhance the air quality

The high efficiency filter can collect the dirt and remove the bacterium, which can be installed on the easy-to-unload place, convenient to be cleaned.

Convenient infrared remote controller

This remote controller YR-H65 can realize the healthy air flow and sterilize function, it is mobile type appearance, so smart and compact. And the infrared controller can be equipped with the controller holder, convenient to fix the remote controller.



Auto-restart function (optional)

All indoor units have auto-restart function. When the power supply cut off suddenly, the unit will automatically recover the previous running mode once the power supply is on.

Self-diagnostic function

In the course of operation, if the failure occurs, the failure code will display on the wired controller or on the operation panel. Then according to the failure code chart, you can eliminate the failure soon.

Central control function, if connected with a detector and a central controller

That is convenient for building management.

Adjustable heating temperature compensation

In heating mode, the temperature compensation can be adjusted by the remote controller. If you do not want the compensation, you can set the compensation as 0 degree.

Software for diagnostic installation

After installation, you can use file "X-MULTI Setup Assistant " to know the installation is OK or not, if system has error, software will give you trouble shooting.

2. Specifications

Item			Model	AU182XFERA	
Function			——	Cooling	Heating
Rating capacity			W	5300	7000
Power input (indoor + outdoor)			W	1650	1800
Current input (indoor + outdoor)			A	7.3	8.0
EER / COP			W/W	3.21	3.89
Minimum capacity			W	1500	1800
Power input			W	500	500
Maximum capacity			W	5800	7300
Power input (indoor + outdoor)			W	2300	2300
Power source			——	1PH, 220-230V~, 50Hz	
Max.Running current (indoor + outdoor)			A / A	10.2	10.2
Power facor(under rating power input)			——	99%	99%
Fuse size (recommended size)			A	25	
Outdoor unit	Compressor	Model / Manufacture	——	TNB175FLBM / MELCO	
		Oil charge and type	——	870CC, MEL 56	
		Type	——	Twin Rotary (DC inverter)	
		Number	——	1	
	Fan	Type × Number	——	Axial × 1	
		Speed	r/min	850 / 700 / 500	
		Motor output/input power	W	35/85	
		Air-flows (H/M/L)	m³/h	about 3000	
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0	
		Face area	m²	about 0.52	
	Dimension (WxDxH)	External	mm	928/288/680	
		Package	mm	1015/405/760	
	Refrigerant control method		——	PMVs	
	Defrosting method		——	Automatic by reversible cycle	
	Crankcase heater power		W	35	
Noise level	H/M/L	dB(A)	51/-/-		
Weight	Net / Shipping	kg / kg	54 / 60		
Piping	Refrigerant	Type / Charge	kg	R410A / 2.0	
		No need to recharge	m	30	
		Recharge	g/m	20	
	Pipe	Liquid	mm	3* Φ6.35	
		Gas	mm	3* Φ9.52	
	Connecting method		——	Flared	
	Between I.U &O.U	Max.Drop between IU & OU	m	10(indoor unit lower than outdoor unit)	
		Max.Drop between IU & OU	m	15 (indoor unit higher than outdoor unit)	
		Max.Drop between indoor units	m	5	
		Max.Piping length between IU & OU	m	25	
Max.Total liquid piping length		m	45		
1. The above performance data are from the combination of AU182XFERA+2*AS092XVERA+AS122XVERA.					
2. Large drop and long piping installation will obviously reduce the totao capacity.					

Item			Model	AU222XFERA		
Function			——	Cooling	Heating	
Rating capacity			W	6400	7300	
Power input (indoor + outdoor)			W	2100	2000	
Current input (indoor + outdoor)			A	9.3	8.9	
EER / COP			W/W	3.04	3.65	
Minimum capacity			W	1500	1800	
Power input			W	500	500	
Maximum capacity			W	6800	7500	
Power input (indoor + outdoor)			W	2900	2900	
Power source			——	1PH, 220-230V~, 50Hz		
Max.Running current (indoor + outdoor)			A / A	12.9	12.9	
Power facor(under rating power input)			——	99%	99%	
Fuse size (recommended size)			A	25		
Outdoor unit	Compressor	Model / Manufacture	——	TNB175FLBM / MELCO		
		Oil charge and type	——	870CC, MEL 56		
		Type	——	Twin Rotary (DC inverter)		
		Number	——	1		
	Fan	Type × Number	——	Axial × 1		
		Speed	r/min	960 / 700 / 500		
		Motor output/input power	W	35/100		
		Air-flows (H/M/L)	m³/h	about 3200		
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0		
		Face area	m²	about 0.52		
	Dimension (WxDxH)	External	mm	928/288/680		
		Package	mm	1015/405/760		
	Refrigerant control method		——	PMVs		
	Defrosting method		——	Automatic by reversible cycle		
	Crankcase heater power		W	35		
Noise level		H/M/L	dB(A)	55/-/-		
Weight		Net / Shipping	kg / kg	54 / 60		
Piping	Refrigerant	Type / Charge	kg	R410A / 2.0		
		No need to recharge	m	30		
		Recharge	g/m	20		
	Pipe	Liquid	mm	3* Φ6.35		
		Gas	mm	3* Φ9.52		
	Connecting method		——	Flared		
	Between I.D &O.D	Max.Drop between IU & OU		m	10(indoor unit lower than outdoor unit)	
		Max.Drop between IU & OU		m	15 (indoor unit higher than outdoor unit)	
		Max.Drop between indoor units		m	5	
Max.Piping length between IU & OU		m	25			
Max.Total liquid piping length		m	45			
1. The above performance data are from the combination of AU222XFERA+AS092XVERA+2*AS122XVERA.						
2. Large drop and long piping installation will obviously reduce the totao capacity.						

Item			Model	AU252XGERA	
Function			——	Cooling	Heating
Rating capacity			W	7250	8000
Power input (indoor + outdoor)			W	2250	2200
Current input (indoor + outdoor)			A	10.4	10.4
EER / COP			W/W	3.22	3.64
Minimum capacity			W	1500	1800
Power input			W	500	500
Maximum capacity			W	8200	9000
Power input (indoor + outdoor)			W	3200	3000
Power source			——	1PH, 220-230V~, 50Hz	
Max.Running current (indoor + outdoor)			A / A	14.3	13.5
Power facor(under rating power input)			——	99%	99%
Fuse size (recommended size)			A	30	
Outdoor unit	Compressor	Model / Manufacture	——	TNB175FLBM / MELCO	
		Oil charge and type	——	870CC	
		Type	——	DC TWIN ROTARY	
		Number	——	1	
	Fan	Type × Number	——	Axial × 1	
		Speed	r/min	930 / 700 / 500	
		Motor output/input power	W	98/200	
		Air-flows (H/M/L)	m³/h	about 3400	
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0	
		Face area	m²	about 0.67	
	Dimension (WxDxH)	External	mm	976/335/732	
		Package	mm	1065/420/815	
	Refrigerant control method		——	PMVs	
	Defrosting method		——	Automatic by reversible cycle	
	Crankcase heater power		W	35	
	Noise level	H/M/L	dB(A)	57/-/-	
	Weight	Net / Shipping	kg / kg	58 / 64	
Piping	Refrigerant	Type / Charge	kg	R410A / 2.5	
		No need to recharge	m	30	
		Recharge	g/m	20	
	Pipe	Liquid	mm	4* Φ6.35	
		Gas	mm	4* Φ9.52	
	Connecting method		——	Flared	
	Between I.D & O.D	Max.Drop between IU &OU	m	10(indoor unit lower than outdoor unit)	
		Max.Drop between IU & IU	m	15 (indoor unit higher than outdoor unit)	
		Max.Drop between IU & OU	m	5	
		Max.Piping length between IU & OU	m	25	
Max.Total length		m	60		
1. The above performance data are from the combination of AU252XGERA+3*AD092XLERA					
2. Large drop and long piping installation will obviously reduce the total capacity.					

Item			Model	AU282XHERA		
Function			——	Cooling	Heating	
Rating capacity			W	8000	10000	
Power input (indoor + outdoor)			W	2480	2700	
Current input (indoor + outdoor)			A	11.0	11.9	
EER / COP			W/W	3.22	3.70	
Minimum capacity			W	1500	1800	
Power input			W	550	550	
Maximum capacity			W	9500	11000	
Power input (indoor + outdoor)			W	3800	3800	
Power source			——	1PH, 220-230V~, 50Hz		
Max.Running current (indoor + outdoor)			A / A	16.8	16.8	
Power facor(under rating power input)			——	99%	99%	
Fuse size (recommended size)			A	30		
Outdoor unit	Compressor	Model / Manufacture	——	TNB220FLBM / MELCO		
		Oil charge and type	——	870CC		
		Type	——	Twin Rotary (DC inverter)		
		Number	——	1		
	Fan	Type × Number	——	Axial × 1		
		Speed	r/min	850 / 700 / 500		
		Motor output/input power	W	60/150		
		Air-flows (H/M/L)	m³/h	about 4000		
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0		
		Face area	m²	about 0.75		
	Dimension (WxDxH)	External	mm	1068x340x830		
		Package	mm	1100x440x979		
	Refrigerant control method		——	PMVs		
	Defrosting method		——	Automatic by reversible cycle		
	Crankcase heater power		W	35		
Noise level		H/M/L	dB(A)			
Weight		Net / Shipping	kg / kg	74 / 89		
Piping	Refrigerant	Type / Charge	kg	R410A / 2.6		
		No need to recharge	m	40		
		Recharge	g/m	20		
		Pipe	Liquid	mm	4* Φ6.35	
		Gas	mm	4* Φ9.52		
	Connecting method		——	Flared		
	Between I.D &O.D	Max.Drop between IU &OU		m	10(indoor unit lower than outdoor unit)	
		Max.Drop between IU & IU		m	15 (indoor unit higher than outdoor unit)	
		Max.Drop between IU & OU		m	5	
		Max.Piping length between IU & OU		m	25	
Max.Total length		m	60			
1. The above performance data are from the combination of AU282XHERA+2*AS092XVERA+2*AS122XVERA.						
2. Large drop and long piping installation will obviously reduce the total capacity.						

Item			Model	AU342XHERA		
Function			——	Cooling	Heating	
Rating capacity			W	10000	11000	
Power input (indoor + outdoor)			W	3200	3200	
Current input (indoor + outdoor)			A	14.3	14.3	
EER / COP			W/W	3.13	3.44	
Minimum capacity			W	1500	1800	
Power input			W	550	550	
Maximum capacity			W	11000	11500	
Power input (indoor + outdoor)			W	4000	4000	
Power source			——	1PH, 220-230V~, 50Hz		
Max.Running current (indoor + outdoor)			A / A	18.1	18.1	
Power facor(under rating power input)			——	99%	99%	
Fuse size (recommended size)			A	30		
Outdoor unit	Compressor	Model / Manufacture	——	TNB220FLBM / MELCO		
		Oil charge and type	——	870CC		
		Type	——	Twin Rotary (DC inverter)		
		Number	——	1		
	Fan	Type × Number	——	Axial × 1		
		Speed	r/min	990/ 840/ 590		
		Motor output/input power	W	130/300		
		Air-flows (H/M/L)	m³/h	about 4300		
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0		
		Face area	m²	about 0.75		
	Dimension (WxDxH)	External	mm	1068x340x830		
		Package	mm	1100x440x979		
	Refrigerant control method		——	PMVs		
	Defrosting method		——	Automatic by reversible cycle		
	Crankcase heater power		W	35		
	Noise level	H/M/L	dB(A)	59/-/-		
	Weight	Net / Shipping	kg / kg	74 / 89		
Piping	Refrigerant	Type / Charge	kg	R410A / 3.0		
		No need to recharge	m	40		
		Recharge	g/m	20		
	Pipe	Liquid	mm	4* Φ6.35		
		Gas	mm	4* Φ9.52		
	Connecting method		——	Flared		
	Between I.D &O.D	Drop between IU & OU		m	≤5	
		Piping length between IU & OU		m	≤10	
		Total liquid piping length		m	≤40	
		Max.Drop between IU &OU		m	10(indoor unit lower than outdoor unit)	
		Max.Drop between IU & IU		m	15 (indoor unit higher than outdoor unit)	
		Max.Piping length between IU & OU		m	25	
		Max.Total length		m	60	
1. The above performance data are from the combination of AU342XHERA+2*AD092XLERA+2*AD122XLERA.						
2. Large drop and long piping installation will obviously reduce the total capacity.						

Item			Model	AU362XHERA		
Function			——	Cooling	Heating	
Rating capacity			W	10000	11000	
Power input (indoor + outdoor)			W	3200	3200	
Current input (indoor + outdoor)			A	14.3	14.3	
EER / COP			W/W	3.13	3.44	
Minimum capacity			W	1500	1800	
Power input			W	550	550	
Maximum capacity			W	11000	11500	
Power input (indoor + outdoor)			W	4000	4000	
Power source			——	1PH, 220-230V~, 50Hz		
Max.Running current (indoor + outdoor)			A / A	18.1	18.1	
Power facor(under rating power input)			——	99%	99%	
Fuse size (recommended size)			A	30		
Outdoor unit	Compressor	Model / Manufacture	——	TNB220FLBM / MELCO		
		Oil charge and type	——	870CC		
		Type	——	Twin Rotary (DC inverter)		
		Number	——	1		
	Fan	Type × Number	——	Axial × 1		
		Speed	r/min	990/ 840/ 590		
		Motor output/input power	W	130/300		
		Air-flows (H/M/L)	m³/h	about 4300		
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0		
		Face area	m²	about 0.75		
	Dimension (WxDxH)	External	mm	1068x340x830		
		Package	mm	1100x440x979		
	Refrigerant control method		——	PMVs		
	Defrosting method		——	Automatic by reversible cycle		
	Crankcase heater power		W	35		
Noise level		H/M/L	dB(A) 59/-/-			
Weight		Net / Shipping	kg / kg	74 / 89		
Piping	Refrigerant	Type / Charge	kg	R410A / 3.0		
		No need to recharge	m	40		
		Recharge	g/m	20		
	Pipe	Liquid	mm	5* Φ6.35		
		Gas	mm	5* Φ9.52		
	Connecting method		——	Flared		
	Between I.D &O.D	Drop between IU & OU		m	≤5	
		Piping length between IU & OU		m	≤10	
		Total liquid piping length		m	≤40	
		Max.Drop between IU &OU		m	10(indoor unit lower than outdoor unit)	
		Max.Drop between IU & IU		m	15 (indoor unit higher than outdoor unit)	
Max.Piping length between IU & OU		m	25			
Max.Total length		m	60			
1. The above performance data are from the combination of AU362XHERA+2*AD092XLERA+2*AD122XLERA.						
2. Large drop and long piping installation will obviously reduce the total capacity.						

Item			Model	AS072XVERA		AS092XVERA	
Function			—	Cooling	Heating	Cooling	Heating
Capacity			W	2000	2300	2500	2900
Power cable			—	3 × (1.0~1.5mm ²)			
Communication cable			—	2x(0.75~1.25mm ²), must be shielded			
Dehumidifying capacity			10 - ³ ×m³/h	1.0	/	1.0	/
Power source			N, V, Hz	1,220-230~, 50			
Running current			A / A	0.15	0.15	0.15	0.15
	Fan	Type × Number	—	CROSS×1		CROSS×1	
		Speed	r/min	1150/1050/950		1200/1100/1000	
		Motor output/input power	W	16/40		16/40	
		Air-flows (H/M/L)	m³/h	480/430/380		520/450/390	
	Heat exchanger	Type / Diameter	mm	TP2M / 7×0.35			
		Face area	m²	about 0.15		about 0.15	
	Dimension (L×W×H)	External	mm	795*197*265		795×197×265	
		Package	mm	880×315×330		880×315×330	
	Drainage pipe	material, diameter	mm	PVC, 11.4/16.4			
	Controller type		—	Infrared (YR-H65)			
	Refrigerant control		—	PMV on outdoor unit			
	Noise level	H/M/L	dB(A)	36/33/30		38/34/31	
Weight	Net / Shipping	kg / kg	7.6/10.6		7.6/10.6		
Piping	Refrigerant	Type	—	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	9.52		9.52	
	Connecting method		—	Flared		Flared	
Item				AS122XVERA		AS182XVERA	
Function			—	Cooling	Heating	Cooling	Heating
Capacity			W	3200	3800	5000	5500
Dehumidifying capacity			10 - ³ ×m³/h	1.6	/	2.0	/
Power cable			—	3 × (1.0~1.5mm ²)			
Communication cable			—	2x(0.75~1.25mm ²), must be shielded			
Power source			N, V, Hz	1, 220~230, 50			
Running current			A / A	0.15	0.15	0.25	0.25
	Fan	Type × Number	—	CROSS×1		CROSS×1	
		Speed	r/min	1250/1150/1050		1200/1050/950	
		Motor output/input power	W	16/40		25/40	
		Air-flows (H-M-L)	m³/h	550/480/430		600/550/500	
	Heat exchanger	Type / Diameter	mm	TP2M / 7×0.35			
		Face area	m²	about 0.20		about 0.20	
	Dimension (L×W×H)	External	mm	795*197×265		870*225*305	
		Package	mm	880×315×330		962*365*312	
	Drainage pipe	material, diameter	mm	PVC, 11.4/16.4			
	Controller type		—	Infrared (YR-H65)			
	Refrigerant control		—	PMV on outdoor unit			
	Noise level	H/M/L	dB(A)	39/36/33		42/40/37	
Weight	Net / Shipping	kg / kg	7.6/10.6		12/15		
Piping	Refrigerant	Type	—	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	9.52		12.7	
	Connecting method		—	Flared		Flared	

Item			Model	AB092XCERA		AB122XCERA	
Function			——	Cooling	Heating	Cooling	Heating
Capacity			W	2500	2900	3500	3800
Dehumidifying capacity			10 - ³ m³/h	1.0	/	1.2	/
Power cable			——	3 × (1.0~1.5mm ²)			
Communication cable			——	2x(0.75~1.25mm ²), must be shielded			
Power source			N, V, Hz	1, 220~230, 50			
Running current			A	0.45	0.45	0.45	0.45
	Fan	Type × Number	——	CENTRIFUGAL × 1		CENTRIFUGAL × 1	
		Speed	r/min	650/570/520		750/650/540	
		Motor output/input power	W	38/95		38/95	
		Air-flows (H/M/L)	m³/h	620/560/530		670/600/550	
	Heat exchanger	Type / Diameter	mm	7		7	
		Face area	m²	about 0.273		about 0.273	
		Temp. scope	℃	cooling: 6~7 / heating: 43~60			
	Dimension (L×W×H)	External	mm	570/570/260		570/570/260	
		Package	mm	718/680/380		718/680/380	
	Drainage pipe	material, diameter	mm	PVC, 32/26(o.d./l.d.*)		PVC, 32/26(o.d./l.d.*)	
	Controller type		——	Infrared YR-H71 or wired YR-E12			
	Refrigerant control		——	PMV on outdoor unit			
	Fresh air hole dimension		mm	100		100	
	Electricity Heater		——	/		/	
	Noise level	H/M/L	dB(A)	41/39/38		44/40/37	
Weight	Net / Shipping	kg / kg	17/20		17/20		
Piping	Refrigerant	Type	——	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	9.52		9.52	
	Connecting method		——	Flared		Flared	
Panel	Dimension (L×W×H)	External	mm	700/700/60		700/700/60	
		Package	mm	740/750/115		740/750/115	
	Weight	Net / Shipping	kg / kg	2.8/4.8		2.8/4.8	

Item			Model	AB142XCERA		AB182XCERA	
Function			——	Cooling	Heating	Cooling	Heating
Capacity			W	4100	4600	5000	5500
Dehumidifying capacity			10 - ³ m³/h	1.6	/	2	/
Power cable			——	3 × 0.75mm ²			
Communication cable			——	2x(0.75~1.25mm ²), must be shielded			
Power source			N, V, Hz	1, 220~230, 50			
Running current			A	0.45	0.45	0.45	0.45
	Fan	Type × Number	——	CENTRIFUGAL × 1		CENTRIFUGAL × 1	
		Speed	r/min	750/650/540		750/650/540	
		Motor output/input power	W	38/95		38/95	
		Air-flows (H/M/L)	m³/h	670/600/550		670/600/550	
	Heat exchanger	Type / Diameter	mm	7		7	
		Face area	m²	about 0.273		about 0.273	
		Temp. scope	℃	cooling: 6~7 / heating: 43~60			
	Dimension (L×W×H)	External	mm	570/570/260		570/570/260	
		Package	mm	718/680/380		718/680/380	
	Drainage pipe	material, diameter	mm	PVC, 32/26(o.d./l.d.*)		PVC, 32/26(o.d./l.d.*)	
	Controller type		——	Infrared YR-H71 or wired YR-E12			
	Refrigerant control		——	PMV on outdoor unit			
	Fresh air hole dimension		mm	100		100	
	Electricity Heater		——	/		/	
	Noise level	H/M/L	dB(A)	44/40/37		44/40/37	
Weight	Net / Shipping	kg / kg	19/23.5		19/23.5		
Piping	Refrigerant	Type	——	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	12.7		12.7	
	Connecting method		——	Flared		Flared	
Panel	Dimension	External	mm	700/700/60		700/700/60	
		Package	mm	740/750/115		740/750/115	
	Weight	Net / Shipping	kg / kg	2.8/4.8		2.8/4.8	

* o.d.=outer diameter; i.d.=inner diameter

Item			Model	AD092XLERA		AD122XLERA	
Function			——	Cooling	Heating	Cooling	Heating
Capacity			W	2500	2900	3500	3800
Dehumidifying capacity			10 - ³ ×m³/h	1.0	/	1.2	/
Power cable			——	3 × (1.0~1.5mm ²)			
Communication cable			——	2x(0.75~1.25mm ²), must be shielded			
Power source			N, V, Hz	1, 220~230, 50			
Running current			A	0.35	0.35	0.35	0.35
	Fan	Type × Number	——	CROSS × 1		CROSS × 1	
		Speed	r/min	1050/950/850/750		1050/950/850/750	
		Motor output/input power	W	30/75		30/75	
		Air-flows (H/M/L)	m³/h	550/500/450/400		550/500/450/400	
	Heat exchanger	Type / Diameter	mm	7		7	
		Face area	m²	about 0.12		about 0.12	
		Temp. scope	℃	cooling: 6~7 / heating: 43~60			
	Dimension (L×W×H)	External	mm	610×500×220		610×500×220	
		Package	mm	695/536/265		695/536/265	
	Drainage pipe	material, diameter	mm	(o.d./l.d.*)		(o.d./l.d.*)	
	Controller type		——	Wired controller YR-E12			
	Refrigerant control		——	PMV on outdoor unit			
	Fresh air hole dimension		mm	/		/	
	Electricity Heater		——	/		/	
	Noise level	H/M/L	dB(A)	43/40/38/35		43/40/38/35	
	Weight	Net / Shipping	kg / kg	14/16		14/16	
Piping	Refrigerant	Type	——	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	9.52		9.52	
	Connecting method		——	Flared		Flared	
Item			Model	AD142XLERA		AD182XLERA	
Function			——	Cooling	Heating	Cooling	Heating
Capacity			W	4100	4600	5000	5500
Dehumidifying capacity			10 - ³ ×m³/h	1.6	/	2.0	/
Power cable			——	3 × 0.75mm²			
Communication cable			——	2x(0.75~1.25mm²), must be shielded			
Power source			N, V, Hz	1, 220~230, 50			
Running current			A	0.85	0.85	0.85	0.85
	Fan	Type × Number	——	CROSS × 2		CROSS × 2	
		Speed	r/min	1270/1160/1020/900		1270/1160/1020/900	
		Motor output/input power	W	80/200		80/200	
		Air-flows (H/M/L)	m³/h	780/700/650/600		780/700/650/600	
	Heat exchanger	Type / Diameter	mm	7		7	
		Face area	m²	about 0.23		about 0.23	
		Temp. scope	℃	cooling: 6~7 / heating: 43~60			
	Dimension (L×W×H)	External	mm	1090×500×220		1090×500×220	
		Package	mm	1161/536/269		1161/536/269	
	Drainage pipe	material, diameter	mm	(o.d./l.d.*)		(o.d./l.d.*)	
	Controller type		——	Wired YR-E12			
	Refrigerant control		——	PMV on outdoor unit			
	Fresh air hole dimension		mm	/		/	
	Electricity Heater		——	/		/	
	Noise level	H/M/L	dB(A)	46/44/40/38		46/44/40/38	
	Weight	Net / Shipping	kg / kg	25/29		25/29	
Piping	Refrigerant	Type	——	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	12.7		12.7	
	Connecting method		——	Flared		Flared	

* o.d.=outer diameter; i.d.=inner diameter

Item			Model	AC142XCERA		AC182XCERA	
Function			——	Cooling	Heating	Cooling	Heating
Capacity			W	4100	4600	5000	5500
Dehumidifying capacity			10 ⁻³ ×m³/h	1.6	/	2	/
Power cable			——	3 × 0.75mm²			
Communication cable			——	2x(0.75~1.25mm²), must be shielded			
Power source			N, V, Hz	1, 220~230, 50			
Running current			A	0.45	0.45	0.45	0.45
	Fan	Type × Number	——	CENTRIFUGAL × 2		CENTRIFUGAL × 2	
		Speed	r/min	1150/1050/850		1150/1050/850	
		Motor output/input power	W	28/80		28/80	
		Air-flows (H/M/L)	m³/h	700/640/580		700/640/580	
	Heat exchanger	Type / Diameter	mm	TP2M / 7×0.35			
		Face area	m²	about 0.49		about 0.49	
		Temp. scope	℃	cooling: 6~7 / heating: 43~60			
	Dimension (L×W×H)	External	mm	990/655/199		990/655/199	
		Package	mm	1150/750/300		1150/750/300	
	Drainage pipe	material, diameter	mm	PVC, 20/18(o.d./l.d.*)		PVC, 20/18(o.d./l.d.*)	
	Controller type		——	Infrared YR-H71 or wired YR-E12			
	Refrigerant control		——	PMV on outdoor unit			
	Fresh air hole dimension		mm	/		/	
	Electricity Heater		——	/		/	
	Noise level	H/M/L	dB(A)	48/45/41		48/45/41	
	Weight	Net / Shipping	kg / kg	28.3/34.3		28.3/34.3	
Piping	Refrigerant	Type	——	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	12.7		12.7	
	Connecting method		——	Flared		Flared	

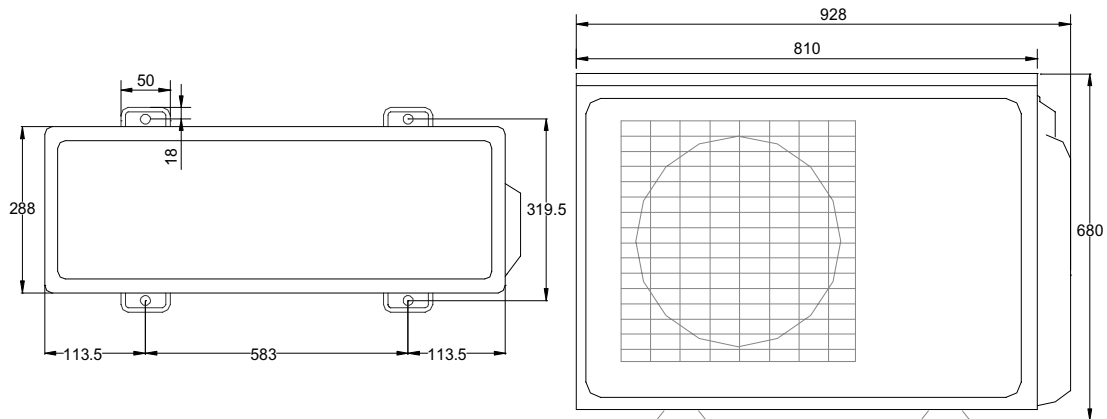
* o.d.=outer diameter; i.d.=inner diameter

Item			Model	AF092XCERA		AF122XCERA	
Function			——	Cooling	Heating	Cooling	Heating
Capacity			W	2500	2900	3500	3800
Dehumidifying capacity			10 ⁻³ ×m³/h	1.0	/	1.2	/
Power cable			——	3 × (1.0~1.5mm ²)			
Communication cable			——	2x(0.75~1.25mm ²), must be shielded			
Power source			N, V, Hz	1, 220~230, 50			
Running current			A	0.45	0.45	0.45	0.45
	Fan	Type × Number	——	CROSS × 2		CROSS × 2	
		Speed	r/min	1000/900/800		1050/950/850	
		Motor output/input power	W	50/100		50/100	
		Air-flows (H/M/L)	m³/h	480/420/370		510/450/400	
	Heat exchanger	Type / Diameter	mm	TP2M / 7×0.35			
		Face area	m²	about 0.25		about 0.25	
		Temp. scope	℃	cooling: 6~7 / heating: 43~60			
	Dimension (WxDxH)	External	mm	720/205/630		720/205/630	
		Package	mm	780/280/690		780/280/690	
	Drainage pipe	material, diameter	mm	PVC, 16.4/11.4(o.d./l.d.*)		PVC, 16.4/11.4(o.d./l.d.*)	
	Controller type		——	Infrared YR-H71			
	Refrigerant control		——	PMV on outdoor unit			
	Fresh air hole dimension		mm	/		/	
	Electricity Heater		——	/		/	
	Noise level	H/M/L	dB(A)	40/38/36		41/39/37	
Weight	Net / Shipping	kg / kg	17/20.7		17/20.7		
Piping	Refrigerant	Type	——	R410A		R410A	
	Pipe	Liquid	mm	6.35		6.35	
		Gas	mm	9.52		9.52	
	Connecting method		——	Flared		Flared	

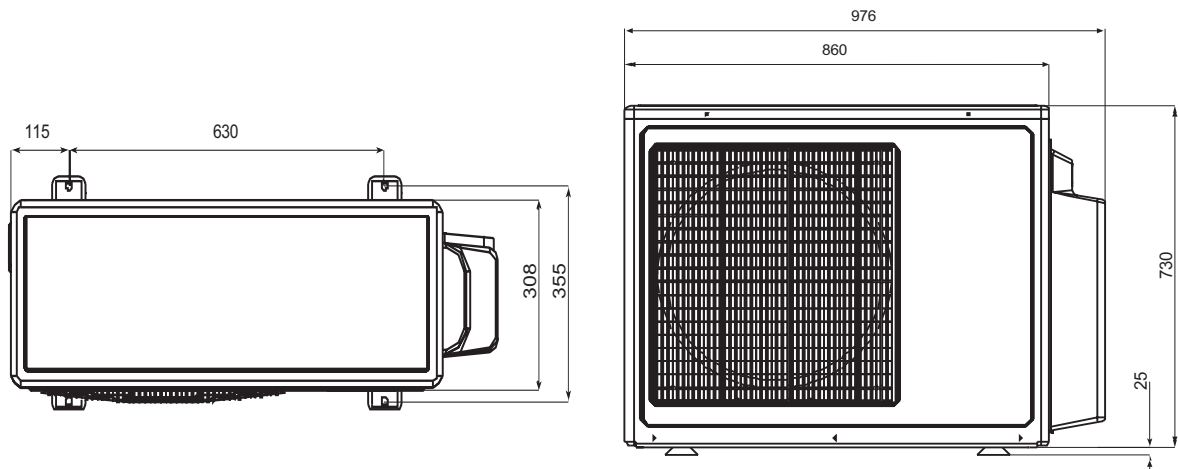
* o.d.=outer diameter; i.d.=inner diameter

3. Dimension

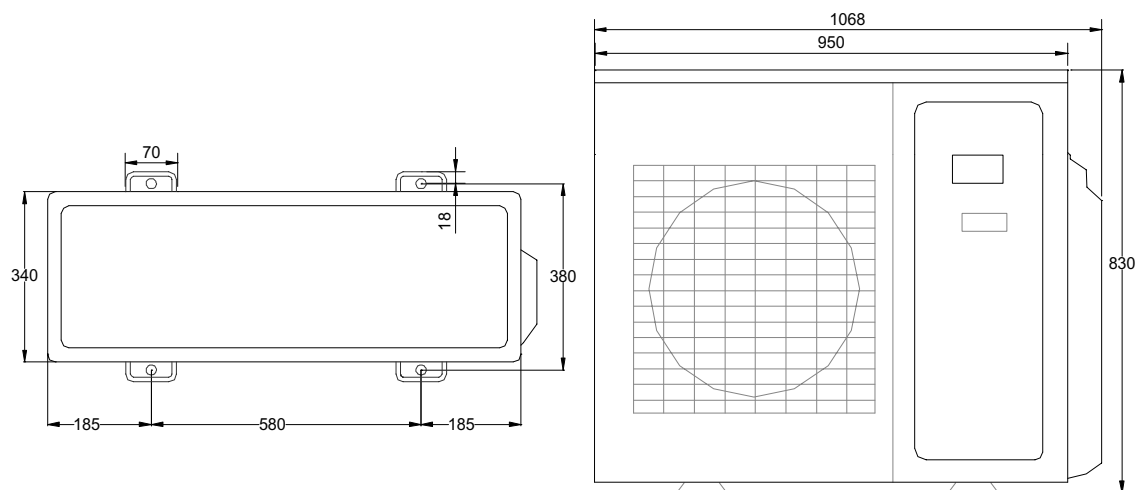
AU182XFERA,AU222XFERA



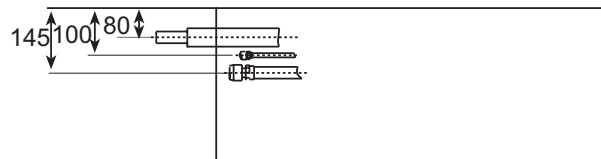
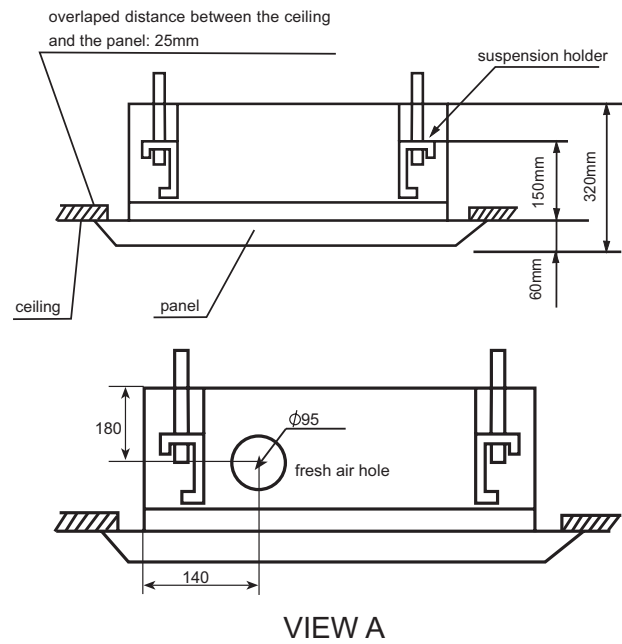
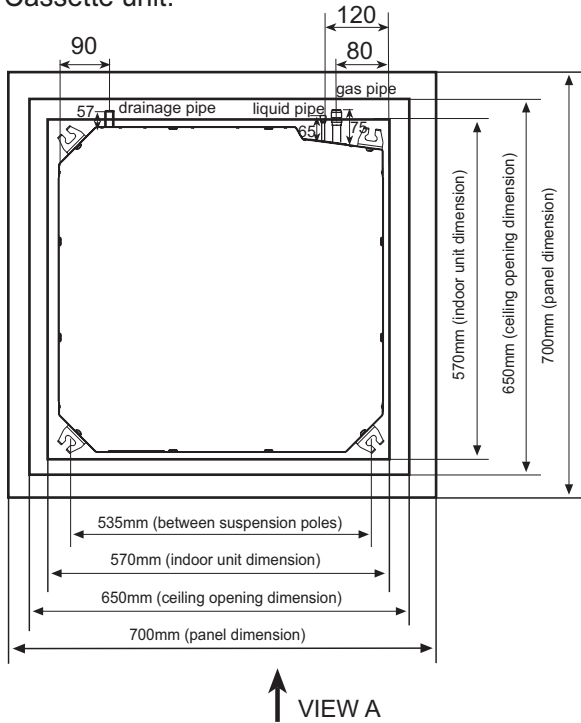
AU252XGERA:



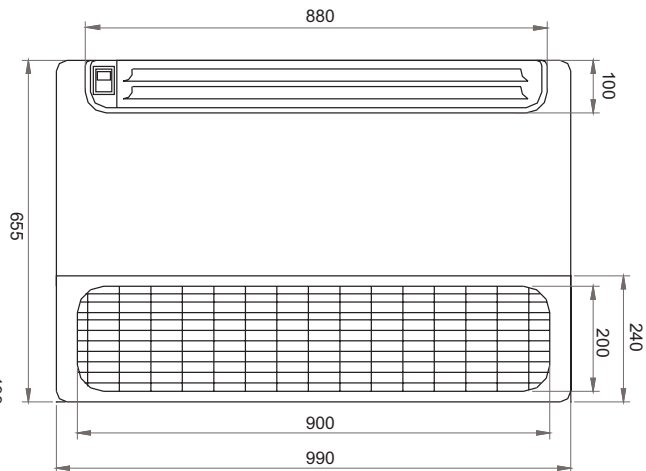
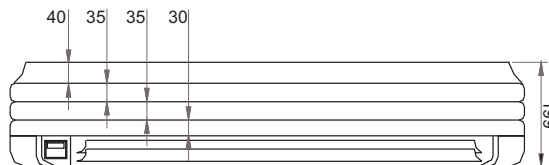
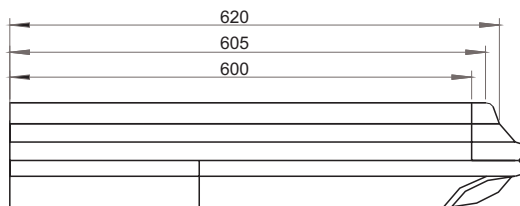
AU282XHERA:



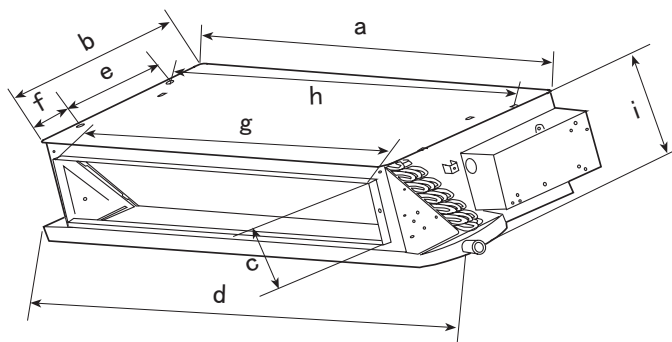
Cassette unit:



Convertible unit:



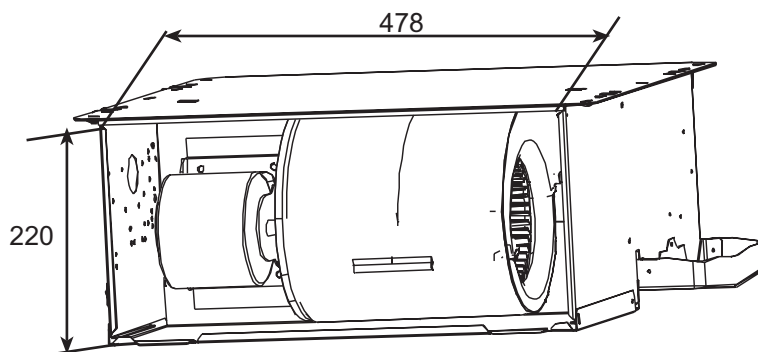
Ceiling concealed type unit:



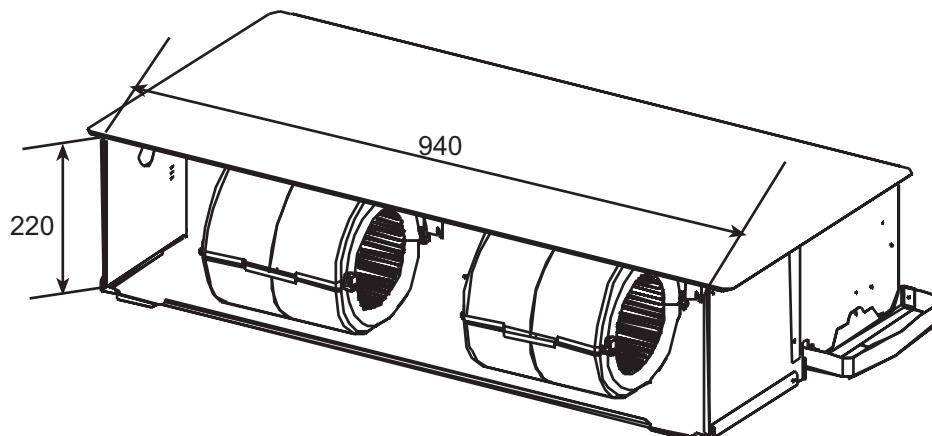
Installation dimension:(mm)

Unit model	a	b	c	d	e	f	g	h	i
AD092XLERA AD122XLERA	538	483.5	131	610	255	105	418	508	220
AD142XLERA AD182XLERA	1002	483.5	131	1105	255	105	880	970	220

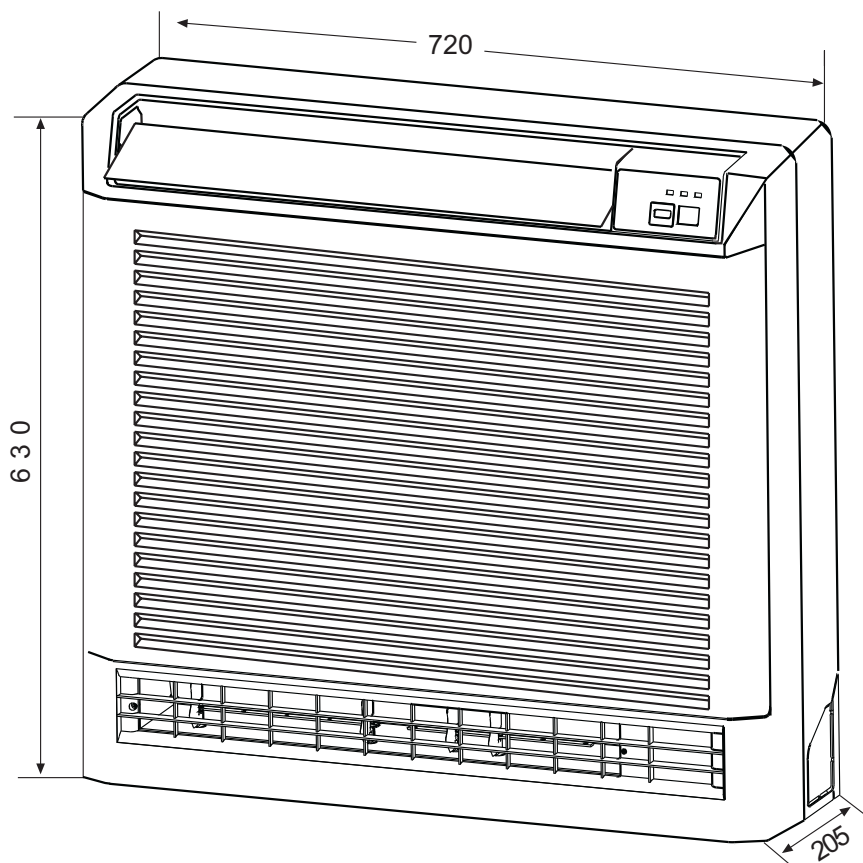
AD092XLERA
AD122XLERA



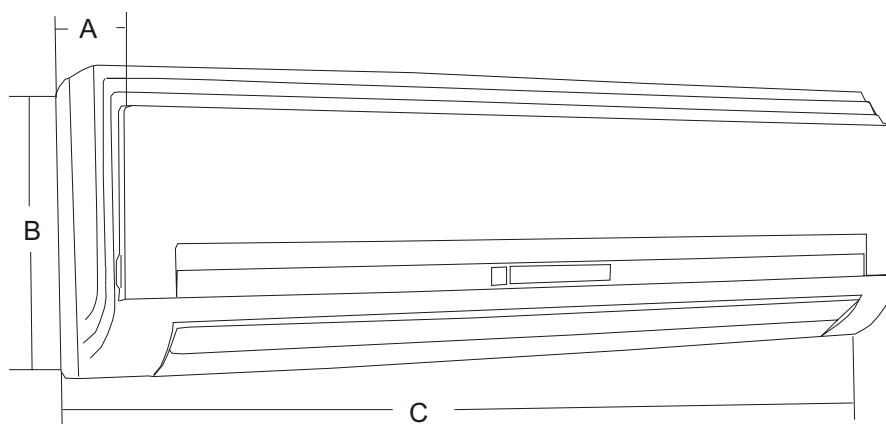
AD142XLERA
AD182XLERA



Console type unit:



Wall Mounted Type



model	A	B	C
AS07/09/122XVERA	197	265	795
AS182XVERA	225	305	870

4. Pipe and wiring installation

4.1 Multi combination and the data

AU182XFERA combination and the data

COOLING

Co mb.	Combinations			capacity(kW) (Nom. cooling)			total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	7	—	2.0	2.0	—	1.00	4.00	4.40	0.47	1.60	2.30	2.15	7.80	10.20	2.50	E
	7	9	—	2.0	2.5	—	1.00	4.50	4.90	0.47	1.75	2.30	2.15	7.80	10.20	2.57	E
	7	12	—	2.0	3.2	—	1.00	5.20	5.80	0.47	1.75	2.30	2.15	7.80	10.20	2.97	C
	7	14	—	1.73	3.47	—	1.00	5.20	5.80	0.55	1.85	2.30	2.50	8.30	10.20	2.81	C
	7	18	—	1.48	3.72	—	1.00	5.20	5.80	0.55	1.85	2.30	2.50	8.30	10.20	2.81	C
	9	9	—	2.5	2.5	—	1.00	5.00	5.40	0.47	1.75	2.30	2.15	7.80	10.20	2.86	C
	9	12	—	2.3	2.9	—	1.00	5.20	5.80	0.47	1.75	2.30	2.15	7.80	10.20	2.97	C
	9	14	—	2.0	3.2	—	1.00	5.20	5.80	0.55	1.85	2.30	2.50	8.30	10.20	2.81	C
	9	18	—	1.73	3.47	—	1.00	5.20	5.80	0.55	1.85	2.30	2.50	8.30	10.20	2.81	C
	12	12	—	2.6	2.6	—	1.00	5.20	5.80	0.47	1.75	2.30	2.15	7.80	10.20	2.97	C
	12	14	—	2.42	2.78	—	1.00	5.20	5.80	0.55	1.85	2.30	2.50	8.30	10.20	2.81	C
	12	18	—	2.18	3.12	—	1.00	5.30	5.80	0.55	1.85	2.30	2.50	8.30	10.20	2.86	C
TRI (1x3)	7	7	7	1.73	1.73	1.73	1.50	5.20	5.80	0.50	1.70	2.30	2.29	7.62	10.20	3.06	B
	7	7	9	1.60	1.60	2.00	1.50	5.20	5.80	0.50	1.70	2.30	2.29	7.62	10.20	3.06	B
	7	7	12	1.39	1.39	2.42	1.50	5.20	5.80	0.50	1.70	2.30	2.29	7.62	10.20	3.06	B
	7	9	9	1.48	1.86	1.86	1.50	5.20	5.80	0.50	1.70	2.30	2.29	7.62	10.20	3.06	B
	7	9	12	1.30	1.63	2.27	1.50	5.20	5.80	0.50	1.65	2.30	2.29	7.62	10.20	3.15	B
	9	9	9	1.73	1.73	1.73	1.50	5.20	5.80	0.50	1.65	2.30	2.29	7.62	10.20	3.15	B
	9	9	12	1.56	1.56	2.18	1.50	5.30	5.80	0.50	1.65	2.30	2.29	7.40	10.20	3.21	A

HEATING

Co mb.	Combinations			capacity(kW) (Nom. heating)			total heating capacity(kW)			total power input (kW)			total current (A)@230V			COP (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	7	—	2.30	2.30	—	1.20	4.60	5.00	0.55	1.85	2.30	2.50	9.10	10.20	2.49	F
	7	9	—	2.30	2.90	—	1.20	5.20	5.70	0.55	2.05	2.30	2.50	9.10	10.20	2.54	F
	7	12	—	2.30	3.80	—	1.20	6.10	6.50	0.55	1.90	2.30	2.50	8.43	10.20	3.21	C
	7	14	—	2.30	4.60	—	1.30	6.90	7.30	0.60	1.95	2.30	2.65	8.65	10.20	3.54	B
	7	18	—	2.10	4.90	—	1.30	7.00	7.30	0.60	1.95	2.30	2.65	8.65	10.20	3.59	B
	9	9	—	2.90	2.90	—	1.20	5.80	6.50	0.55	1.90	2.30	2.50	8.43	10.20	3.05	C
	9	12	—	2.80	3.80	—	1.20	6.60	6.80	0.55	1.90	2.30	2.50	8.43	10.20	3.47	B
	9	14	—	2.70	4.30	—	1.30	7.00	7.30	0.60	2.00	2.30	2.65	8.65	10.20	3.50	B
	9	18	—	2.40	4.60	—	1.30	7.00	7.30	0.60	2.00	2.30	2.65	8.65	10.20	3.50	B
	12	12	—	3.50	3.50	—	1.20	7.00	7.30	0.55	1.95	2.30	2.50	8.43	10.20	3.59	B
	12	14	—	3.20	3.80	—	1.30	7.00	7.30	0.60	2.00	2.30	2.65	8.65	10.20	3.50	B
	12	18	—	2.85	4.15	—	1.30	7.00	7.30	0.60	2.00	2.30	2.65	8.65	10.20	3.50	B
TRI (1x3)	7	7	7	2.30	2.30	2.30	1.50	6.90	6.90	0.55	2.05	2.30	2.50	8.21	10.20	3.37	C
	7	7	9	2.15	2.15	2.70	1.50	7.00	7.30	0.55	2.00	2.30	2.50	8.21	10.20	3.50	B
	7	7	12	1.95	1.95	3.10	1.50	7.00	7.30	0.55	1.95	2.30	2.50	8.21	10.20	3.59	B
	7	9	9	2.00	2.50	2.50	1.50	7.00	7.30	0.55	1.95	2.30	2.50	8.21	10.20	3.59	B
	7	9	12	1.80	2.25	2.95	1.50	7.00	7.30	0.55	1.90	2.30	2.50	8.21	10.20	3.68	A
	9	9	9	2.30	2.30	2.30	1.50	6.90	7.30	0.55	1.85	2.30	2.50	8.21	10.20	3.73	A
	9	9	12	2.10	2.10	2.80	1.50	7.00	7.30	0.55	1.80	2.30	2.50	7.99	10.20	3.89	A

AU222XFERA combination and the data

COOLING

Co mb.	Combinations			Rated capacity(Kw) (Nom. cooling)			total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	9	—	2.00	2.50	—	1.00	4.50	4.90	0.47	1.75	2.90	2.20	7.76	12.90	2.57	E
	7	12	—	2.00	3.20	—	1.00	5.20	5.60	0.47	1.75	2.90	2.20	7.76	12.90	2.97	C
	7	14	—	2.00	4.10	—	1.00	6.10	6.50	0.47	2.20	2.90	2.20	9.76	12.90	2.77	D
	7	18	—	1.85	4.55	—	1.20	6.40	6.50	0.55	2.20	2.90	2.50	9.76	12.90	2.91	C
	9	9	—	2.50	2.50	—	1.00	5.00	5.40	0.55	1.75	2.90	2.50	7.76	12.90	2.86	C
	9	12	—	2.50	3.20	—	1.00	5.70	6.10	0.47	2.00	2.90	2.20	8.87	12.90	2.85	C
	9	14	—	2.40	4.00	—	1.00	6.40	6.50	0.47	2.20	2.90	2.20	9.76	12.90	2.91	C
	9	18	—	2.15	4.25	—	1.20	6.40	6.50	0.55	2.20	2.90	2.50	9.76	12.90	2.91	C
	12	12	—	3.20	3.20	—	1.00	6.40	6.50	0.47	2.20	2.90	2.20	9.76	12.90	2.91	C
	12	14	—	2.80	3.60	—	1.20	6.40	6.50	0.55	2.25	2.90	2.50	9.98	12.90	2.84	C
TRI (1x3)	7	7	7	2.00	2.00	2.00	1.50	6.00	6.60	0.50	2.15	2.90	2.30	9.54	12.90	2.79	D
	7	7	9	2.00	2.00	2.40	1.50	6.40	6.80	0.50	2.15	2.90	2.30	9.54	12.90	2.98	C
	7	7	12	1.80	1.80	2.80	1.50	6.40	6.80	0.50	2.15	2.90	2.30	9.54	12.90	2.98	C
	7	7	14	1.60	1.60	3.20	1.50	6.40	6.80	0.55	2.15	2.90	2.50	9.54	12.90	2.98	C
	7	7	18	1.45	1.45	3.50	1.50	6.40	6.80	0.55	2.15	2.90	2.50	9.54	12.90	2.98	C
	7	9	9	1.70	2.35	2.35	1.50	6.40	6.80	0.50	2.15	2.90	2.30	9.54	12.90	2.98	C
	7	9	12	1.65	2.10	2.65	1.50	6.40	6.80	0.50	2.15	2.90	2.30	9.54	12.90	2.98	C
	7	9	14	1.50	1.90	3.00	1.50	6.40	6.80	0.60	2.15	2.90	2.65	9.54	12.90	2.98	C
	7	12	12	1.60	2.40	2.40	1.50	6.40	6.80	0.60	2.15	2.90	2.65	9.54	12.90	2.98	C
	9	9	9	2.10	2.10	2.10	1.50	6.30	6.80	0.50	2.15	2.90	2.30	9.54	12.90	2.93	C
	9	9	12	1.95	1.95	2.50	1.50	6.40	6.80	0.50	2.15	2.90	2.30	9.54	12.90	2.98	C
	9	9	14	1.75	1.75	2.90	1.50	6.40	6.80	0.60	2.10	2.90	2.65	9.32	12.90	3.05	B
	9	12	12	1.80	2.30	2.30	1.50	6.40	6.80	0.50	2.10	2.90	2.30	9.32	12.90	3.05	B

HEATING

Co mb.	Combinations			Rated capacity(kW) (Nom. heating)			total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	9	—	2.30	2.90	—	1.20	5.20	5.40	0.50	1.90	2.90	2.30	8.65	12.90	2.74	E
	7	12	—	2.30	3.80	—	1.20	6.10	6.50	0.50	1.95	2.90	2.30	8.43	12.90	3.13	C
	7	14	—	2.30	4.60	—	1.20	6.90	7.30	0.50	2.20	2.90	2.30	8.65	12.90	3.14	C
	7	18	—	2.15	5.15	—	1.20	7.30	7.50	0.55	2.20	2.90	2.50	8.65	12.90	3.32	C
	9	9	—	2.90	2.90	—	1.20	5.80	6.20	0.55	1.95	2.90	2.50	9.09	12.90	2.97	D
	9	12	—	2.90	3.80	—	1.20	6.70	7.10	0.50	2.00	2.90	2.30	9.09	12.90	3.35	C
	9	14	—	2.80	4.50	—	1.20	7.30	7.50	0.50	2.25	2.90	2.30	9.32	12.90	3.24	C
	9	18	—	2.50	4.80	—	1.20	7.30	7.50	0.55	2.25	2.90	2.50	9.32	12.90	3.24	C
	12	12	—	3.65	3.65	—	1.20	7.30	7.50	0.55	2.20	2.90	2.50	9.09	12.90	3.32	C
	12	14	—	3.30	4.00	—	1.20	7.30	7.50	0.55	2.15	2.90	2.50	9.54	12.90	3.40	C
TRI (1x3)	7	7	7	2.30	2.30	2.30	1.50	6.90	7.50	0.55	2.05	2.90	2.50	8.21	12.90	3.37	C
	7	7	9	2.25	2.25	2.80	1.50	7.30	7.50	0.55	2.10	2.90	2.50	9.32	12.90	3.48	B
	7	7	12	2.10	2.10	3.10	1.50	7.30	7.50	0.55	2.10	2.90	2.50	9.32	12.90	3.48	B
	7	7	14	1.85	1.85	3.60	1.50	7.30	7.50	0.60	2.15	2.90	2.65	9.54	12.90	3.40	C
	7	7	18	1.70	1.70	3.90	1.50	7.30	7.50	0.60	2.15	2.90	2.65	9.54	12.90	3.40	C
	7	9	9	2.10	2.60	2.60	1.50	7.30	7.50	0.55	2.10	2.90	2.50	9.32	12.90	3.48	B
	7	9	12	1.95	2.30	3.05	1.50	7.30	7.50	0.55	2.10	2.90	2.50	9.32	12.90	3.48	B
	7	9	14	1.75	2.15	3.40	1.50	7.30	7.50	0.60	2.10	2.90	2.65	9.32	12.90	3.48	B
	7	12	12	1.70	2.80	2.80	1.50	7.30	7.50	0.60	2.10	2.90	2.65	9.32	12.90	3.48	B
	9	9	9	2.40	2.40	2.40	1.50	7.20	7.50	0.55	2.10	2.90	2.50	9.32	12.90	3.43	B
	9	9	12	2.18	2.18	2.84	1.50	7.20	7.50	0.55	2.05	2.90	2.50	9.09	12.90	3.51	B
	9	9	14	2.05	2.05	3.20	1.50	7.30	7.50	0.60	2.10	2.90	2.65	9.54	12.90	3.48	B
	9	12	12	2.10	2.60	2.60	1.50	7.30	7.50	0.55	2.00	2.90	2.50	8.87	12.90	3.65	A

AU252XGERA combination and the data

COOLING

Co mb.	Combinations				Rated capacity(Kw) (Nom. cooling)				total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	12	—	—	2.00	3.50	—	—	1.00	5.50	5.90	0.47	2.06	3.20	2.09	9.76	14.50	2.67	D
	7	14	—	—	2.00	4.10	—	—	1.00	6.10	6.50	0.50	2.37	3.20	2.22	11.22	14.50	2.57	E
	7	18	—	—	2.00	5.00	—	—	1.00	7.00	7.40	0.50	2.34	3.20	2.22	11.09	14.50	2.99	C
	9	12	—	—	2.50	3.50	—	—	1.20	6.00	6.40	0.47	2.16	3.20	2.09	10.20	14.50	2.78	D
	9	14	—	—	2.50	4.10	—	—	1.00	6.60	7.00	0.50	2.34	3.20	2.22	11.09	14.50	2.82	C
	9	18	—	—	2.43	4.87	—	—	1.00	7.3	7.90	0.50	2.44	3.20	2.22	11.54	14.50	2.99	C
	12	12	—	—	3.50	3.50	—	—	1.00	7.00	7.40	0.47	2.44	3.20	2.09	11.54	14.50	2.87	C
	12	14	—	—	3.36	3.94	—	—	1.20	7.3	8.00	0.50	2.49	3.20	2.22	11.80	14.50	2.93	C
	12	18	—	—	3.03	4.27	—	—	1.00	7.3	8.00	0.50	2.48	3.20	2.22	11.76	14.50	2.94	C
	14	14	—	—	3.65	3.65	—	—	1.20	7.3	8.00	0.55	2.48	3.20	2.44	11.71	14.50	2.95	C
	14	18	—	—	3.31	3.99	—	—	1.20	7.3	8.00	0.55	2.46	3.20	2.44	11.62	14.50	2.97	C
	18	18	—	—	3.65	3.65	—	—	1.20	7.3	8.00	0.55	2.44	3.20	2.44	11.54	14.50	2.99	C
TRI (1x3)	7	7	7	—	2.00	2.00	2.00	—	1.50	6.00	6.60	0.55	2.44	3.20	2.44	11.54	14.50	2.46	E
	7	7	9	—	2.00	2.00	2.50	—	1.50	6.50	7.10	0.55	2.42	3.20	2.44	11.45	14.50	2.69	D
	7	7	12	—	1.95	1.95	3.41	—	1.50	7.3	8.10	0.55	2.40	3.20	2.44	11.36	14.50	3.04	B
	7	7	14	—	1.83	1.83	3.65	—	1.50	7.3	8.20	0.60	2.34	3.20	2.66	11.09	14.50	3.11	B
	7	7	18	—	1.63	1.63	4.03	—	1.50	7.3	8.20	0.60	2.33	3.20	2.66	11.00	14.50	3.14	B
	7	9	9	—	2.00	2.50	2.50	—	1.50	7.00	7.60	0.55	2.42	3.20	2.44	11.45	14.50	2.89	C
	7	9	12	—	1.83	2.31	3.17	—	1.50	7.3	8.20	0.55	2.39	3.20	2.44	11.31	14.50	3.05	B
	7	9	14	—	1.73	2.11	3.46	—	1.50	7.3	8.20	0.60	2.33	3.20	2.66	11.00	14.50	3.14	B
	7	9	18	—	1.54	1.92	3.84	—	1.50	7.3	8.20	0.60	2.30	3.20	2.66	10.87	14.50	3.18	B
	7	12	12	—	1.63	2.83	2.83	—	1.50	7.3	8.20	0.55	2.44	3.20	2.44	11.54	14.50	2.99	C
	7	12	14	—	1.54	2.59	3.17	—	1.50	7.3	8.20	0.60	2.39	3.20	2.66	11.31	14.50	3.05	B
	7	12	18	—	1.44	2.40	3.46	—	1.50	7.3	8.20	0.60	2.39	3.20	2.66	11.31	14.50	3.05	B
	9	9	9	—	2.43	2.43	2.43	—	1.50	7.3	8.20	0.62	2.39	3.20	2.75	11.31	14.50	3.05	B
	9	9	12	—	2.16	2.16	2.98	—	1.50	7.3	8.20	0.55	2.39	3.20	2.44	11.31	14.50	3.05	B
	9	9	14	—	2.02	2.02	3.27	—	1.50	7.3	8.20	0.60	2.34	3.20	2.66	11.09	14.50	3.11	B
	9	9	18	—	1.83	1.83	3.65	—	1.50	7.3	8.20	0.60	2.34	3.20	2.66	11.09	14.50	3.11	B
	9	12	12	—	1.92	2.69	2.69	—	1.50	7.3	8.20	0.55	2.39	3.20	2.44	11.31	14.50	3.05	B
	9	12	14	—	1.83	2.50	2.98	—	1.50	7.3	8.20	0.60	2.34	3.20	2.66	11.09	14.50	3.11	B
	9	12	18	—	1.68	2.31	3.31	—	1.50	7.3	8.20	0.60	2.34	3.20	2.66	11.09	14.50	3.11	B
QUADRI(1x4)	12	12	12	—	2.43	2.43	2.43	—	1.50	7.3	8.20	0.55	2.39	3.20	2.44	11.31	14.50	3.05	B
	12	12	14	—	2.31	2.31	2.69	—	1.50	7.3	8.20	0.60	2.34	3.20	2.66	11.09	14.50	3.11	B
	7	7	7	7	1.83	1.83	1.83	1.83	1.80	7.3	8.20	0.60	2.33	3.20	2.66	11.00	14.50	3.14	B
	7	7	7	9	1.73	1.73	1.73	2.11	1.80	7.3	8.20	0.60	2.33	3.20	2.66	10.87	14.50	3.13	B
	7	7	7	12	1.54	1.54	1.54	2.69	1.80	7.3	8.20	0.60	2.33	3.20	2.66	10.78	14.50	3.13	B
	7	7	7	14	1.44	1.44	1.44	2.98	1.80	7.3	8.20	0.62	2.35	3.20	2.75	10.65	14.50	3.11	B
	7	7	9	9	1.63	1.63	2.02	2.02	1.80	7.3	8.20	0.60	2.33	3.20	2.66	10.78	14.50	3.13	B
	7	7	9	12	1.44	1.44	1.83	2.59	1.80	7.3	8.20	0.60	2.33	3.20	2.66	10.74	14.50	3.13	B
	7	7	9	14	1.39	1.39	1.73	2.79	1.80	7.3	8.20	0.62	2.35	3.20	2.75	10.65	14.50	3.11	B
	7	7	12	12	1.34	1.34	2.31	2.31	1.80	7.3	8.20	0.60	2.32	3.20	2.66	10.65	14.50	3.15	B
	7	9	9	9	1.54	1.92	1.92	1.92	1.80	7.3	8.20	0.60	2.32	3.20	2.66	10.65	14.50	3.15	B
	7	9	9	12	1.39	1.73	1.73	2.45	1.80	7.3	8.20	0.60	2.30	3.20	2.66	10.56	14.50	3.17	B
	9	9	9	9	1.83	1.83	1.83	1.83	1.80	7.3	8.20	0.60	2.28	3.20	2.66	10.65	14.50	3.21	A
	9	9	9	12	1.68	1.68	1.68	2.26	1.80	7.3	8.20	0.60	2.25	3.20	2.66	10.56	14.50	3.24	A

HEATING

Co mb .	Combinations				Rated capacity(kW) (Nom. heating)				total heating capacity(KW)			total power input (W)			total current (A)@230V			COP (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	12	—	—	2.30	3.80	—	—	1.00	6.10	6.70	0.47	2.11	3.20	2.09	9.98	14.50	2.89	D
	7	14	—	—	2.30	4.60	—	—	1.00	6.90	7.60	0.50	2.39	3.20	2.22	11.31	14.50	2.89	D
	7	18	—	—	2.30	5.50	—	—	1.00	7.80	8.50	0.50	2.39	3.20	2.22	11.31	14.50	3.26	C
	9	12	—	—	2.90	3.80	—	—	1.20	6.70	7.30	0.47	2.16	3.20	2.09	10.20	14.50	3.11	C
	9	14	—	—	2.90	4.50	—	—	1.00	7.40	8.10	0.50	2.39	3.20	2.22	11.31	14.50	3.10	C
	9	18	—	—	2.83	5.37	—	—	1.00	8.2	9.00	0.50	2.39	3.20	2.22	11.31	14.50	3.43	B
	12	12	—	—	3.80	3.80	—	—	1.00	7.60	8.00	0.47	2.34	3.20	2.09	11.09	14.50	3.24	C
	12	14	—	—	3.71	4.49	—	—	1.20	8.2	9.00	0.50	2.39	3.20	2.22	11.31	14.50	3.43	B
	12	18	—	—	3.38	4.82	—	—	1.00	8.2	9.00	0.50	2.39	3.20	2.22	11.31	14.50	3.43	B
	14	14	—	—	4.10	4.10	—	—	1.20	8.2	9.00	0.55	2.48	3.20	2.44	11.76	14.50	3.30	C
TRI (1x3)	14	18	—	—	3.76	4.44	—	—	1.20	8.2	9.00	0.55	2.47	3.20	2.44	11.67	14.50	3.33	C
	18	18	—	—	4.10	4.10	—	—	1.20	8.2	9.00	0.55	2.47	3.20	2.44	11.67	14.50	3.33	C
	7	7	7	—	2.30	2.30	2.30	—	1.50	6.90	7.50	0.55	2.44	3.20	2.44	11.54	14.50	2.83	D
	7	7	9	—	2.30	2.30	2.90	—	1.50	7.50	8.10	0.55	2.42	3.20	2.44	11.45	14.50	3.10	C
	7	7	12	—	2.25	2.25	3.71	—	1.50	8.2	9.00	0.55	2.40	3.20	2.44	11.36	14.50	3.42	B
	7	7	14	—	2.07	2.07	4.05	—	1.50	8.2	9.00	0.60	2.34	3.20	2.66	11.09	14.50	3.50	B
	7	7	18	—	1.64	1.64	4.92	—	1.50	8.2	9.00	0.60	2.33	3.20	2.66	11.00	14.50	3.53	B
	7	9	9	—	2.30	2.90	2.90	—	1.50	8.10	8.90	0.55	2.42	3.20	2.44	11.45	14.50	3.35	C
	7	9	12	—	2.12	2.60	3.47	—	1.50	8.2	9.00	0.55	2.39	3.20	2.44	11.31	14.50	3.43	B
	7	9	14	—	1.93	2.41	3.86	—	1.50	8.2	9.00	0.60	2.33	3.20	2.66	11.00	14.50	3.53	B
	7	9	18	—	1.83	2.22	4.15	—	1.50	8.2	9.00	0.60	2.30	3.20	2.66	10.87	14.50	3.57	B
	7	12	12	—	1.93	3.14	3.14	—	1.50	8.2	9.00	0.55	2.44	3.20	2.44	11.54	14.50	3.36	C
	7	12	14	—	1.78	2.89	3.52	—	1.50	8.2	9.00	0.60	2.39	3.20	2.66	11.31	14.50	3.43	B
	7	12	18	—	1.64	2.60	3.96	—	1.50	8.2	9.00	0.60	2.39	3.20	2.66	11.31	14.50	3.43	B
	9	9	9	—	2.73	2.73	2.73	—	1.50	8.2	9.00	0.62	2.39	3.20	2.75	11.31	14.50	3.43	B
	9	9	12	—	2.33	2.33	3.54	—	1.50	8.2	9.00	0.55	2.39	3.20	2.44	11.31	14.50	3.43	B
	9	9	14	—	2.41	2.41	3.38	—	1.50	8.2	9.00	0.60	2.34	3.20	2.66	11.09	14.50	3.50	B
	9	9	18	—	2.03	2.03	4.15	—	1.50	8.2	9.00	0.60	2.34	3.20	2.66	11.09	14.50	3.50	B
QUADRI(1x4)	9	12	12	—	2.41	2.89	2.89	—	1.50	8.2	9.00	0.55	2.39	3.20	2.44	11.31	14.50	3.43	B
	9	12	14	—	2.12	2.75	3.33	—	1.50	8.2	9.00	0.60	2.34	3.20	2.66	11.09	14.50	3.50	B
	9	12	18	—	1.93	2.56	3.71	—	1.50	8.2	9.00	0.60	2.34	3.20	2.66	11.09	14.50	3.50	B
	12	12	12	—	2.73	2.73	2.73	—	1.50	8.2	9.00	0.55	2.39	3.20	2.44	11.31	14.50	3.43	B
	12	12	14	—	2.56	2.56	3.09	—	1.50	8.2	9.00	0.60	2.34	3.20	2.66	11.09	14.50	3.50	B
	7	7	7	7	2.05	2.05	2.05	2.05	1.80	8.2	9.00	0.60	2.34	3.20	2.66	11.09	14.50	3.50	B
	7	7	7	9	1.93	1.93	1.93	2.41	1.80	8.2	9.00	0.60	2.30	3.20	2.66	10.87	14.50	3.57	B
	7	7	7	12	1.78	1.78	1.78	2.85	1.80	8.2	9.00	0.60	2.30	3.20	2.66	10.87	14.50	3.57	B
	7	7	7	14	1.64	1.64	1.64	3.28	1.80	8.2	9.00	0.62	2.27	3.20	2.75	10.74	14.50	3.61	A
	7	7	9	9	1.83	1.83	2.27	2.27	1.80	8.2	9.00	0.60	2.30	3.20	2.66	10.87	14.50	3.57	B
	7	7	9	12	1.69	1.69	2.12	2.70	1.80	8.2	9.00	0.60	2.30	3.20	2.66	10.87	14.50	3.57	B
	7	7	9	14	1.59	1.59	1.93	3.09	1.80	8.2	9.00	0.62	2.27	3.20	2.75	10.74	14.50	3.61	A
	7	7	12	12	1.54	1.54	2.56	2.56	1.80	8.2	9.00	0.60	2.27	3.20	2.66	10.74	14.50	3.61	A
	7	9	9	9	1.83	2.12	2.12	2.12	1.80	8.2	9.00	0.60	2.27	3.20	2.66	10.74	14.50	3.61	A
	7	9	9	12	1.59	1.93	1.93	2.75	1.80	8.2	9.00	0.60	2.25	3.20	2.66	10.65	14.50	3.64	A
	9	9	9	9	2.05	2.05	2.05	2.05	1.80	8.2	9.00	0.60	2.25	3.20	2.66	10.65	14.50	3.64	A
	9	9	9	12	1.93	1.93	1.93	2.41	1.80	8.2	9.00	0.60	2.25	3.20	2.66	10.65	14.50	3.64	A

AU282XHERA combination and the data

COOLING

Co mb.	Combinations				Rated capacity Output/kW (Nom. cooling)				total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	14	—	—	2.00	4.10	—	—	1.00	6.10	6.50	0.50	2.20	3.80	2.15	9.76	16.80	2.77	D
	7	18	—	—	2.00	5.00	—	—	1.00	7.00	7.40	0.50	2.45	3.80	2.15	10.87	16.80	2.86	C
	9	12	—	—	2.50	3.50	—	—	1.00	6.00	6.40	0.50	2.35	3.80	2.15	10.43	16.80	2.55	E
	9	14	—	—	2.50	4.10	—	—	1.00	6.60	7.00	0.50	2.20	3.80	2.15	9.76	16.80	3.00	B
	9	18	—	—	2.50	5.00	—	—	1.00	7.50	7.90	0.50	2.50	3.80	2.15	11.09	16.80	3.00	B
	12	12	—	—	3.50	3.50	—	—	1.00	7.00	6.80	0.50	2.25	3.80	2.15	9.98	16.80	3.11	B
	12	14	—	—	3.50	4.10	—	—	1.00	7.60	8.00	0.50	2.60	3.80	2.15	11.54	16.80	2.92	C
	12	18	—	—	3.05	4.95	—	—	1.00	8.00	8.40	0.50	2.60	3.80	2.15	11.54	16.80	3.08	B
	14	14	—	—	4.00	4.00	—	—	1.00	8.00	8.60	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
	14	18	—	—	3.50	4.50	—	—	1.00	8.00	8.60	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
TRI (1x3)	18	18	—	—	4.00	4.00	—	—	1.00	8.00	8.60	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
	7	7	7	—	2.00	2.00	2.00	—	1.50	6.00	6.60	0.55	2.70	3.80	2.50	11.98	16.80	2.22	F
	7	7	9	—	2.00	2.00	2.50	—	1.50	6.50	7.10	0.55	2.70	3.80	2.50	11.98	16.80	2.41	E
	7	7	12	—	2.00	2.00	3.50	—	1.50	7.50	8.10	0.55	2.70	3.80	2.50	11.98	16.80	2.78	D
	7	7	14	—	2.00	2.00	4.00	—	1.50	8.00	8.70	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
	7	7	18	—	1.75	1.75	4.50	—	1.50	8.00	8.80	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
	7	9	9	—	2.00	2.00	2.50	—	1.50	6.50	7.10	0.55	2.70	3.80	2.50	11.98	16.80	2.41	E
	7	9	12	—	2.00	2.50	3.50	—	1.50	8.00	8.60	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
	7	9	14	—	1.90	2.30	3.80	—	1.50	8.00	8.70	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
	7	9	18	—	1.70	2.10	4.20	—	1.50	8.00	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	7	12	12	—	1.85	3.05	3.05	—	1.50	7.95	8.60	0.55	2.70	3.80	2.50	11.98	16.80	2.94	C
	7	12	14	—	1.70	2.90	3.40	—	1.50	8.00	8.70	0.55	2.70	3.80	2.50	11.98	16.80	2.96	C
	7	12	18	—	1.60	2.60	3.80	—	1.50	8.00	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	7	14	14	—	1.55	3.20	3.20	—	1.50	7.95	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.00	B
	7	14	18	—	1.40	3.00	3.60	—	1.50	8.00	8.90	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	9	9	9	—	2.5	2.5	2.5	—	1.50	7.50	8.10	0.55	2.65	3.80	2.50	11.76	16.80	2.83	C
	9	9	12	—	2.44	2.44	3.12	—	1.50	8.00	8.60	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	9	9	14	—	2.20	2.20	3.60	—	1.50	8.00	8.70	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	9	9	18	—	2.0	2.0	4.0	—	1.50	8.00	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	9	12	12	—	2.26	2.87	2.87	—	1.50	8.00	8.60	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	9	12	14	—	2.05	2.60	3.35	—	1.50	8.00	8.70	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	9	12	18	—	1.80	2.50	3.70	—	1.50	8.00	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
QUADRI(1x4)	9	14	14	—	1.90	3.05	3.05	—	1.50	8.00	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	9	14	18	—	1.70	2.90	3.40	—	1.50	8.00	8.90	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	12	12	12	—	2.65	2.65	2.65	—	1.50	7.95	8.50	0.55	2.65	3.80	2.50	11.76	16.80	3.00	B
	12	12	14	—	2.45	2.45	3.10	—	1.50	8.00	8.70	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	12	12	18	—	2.20	2.20	3.60	—	1.50	8.00	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.02	B
	12	14	14	—	2.25	2.85	2.85	—	1.50	7.95	8.80	0.55	2.65	3.80	2.50	11.76	16.80	3.00	B
	7	7	7	7	2.0	2.0	2.0	2.0	1.80	8.00	9.20	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	7	9	1.90	1.90	1.90	2.30	1.80	8.00	9.20	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	7	12	1.75	1.75	1.75	2.75	1.80	8.00	9.20	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	7	14	1.60	1.60	1.60	3.20	1.80	8.00	9.30	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	7	18	1.45	1.45	1.45	3.65	1.80	8.00	9.50	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	9	9	1.75	1.75	2.25	2.25	1.80	8.00	9.20	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	9	12	1.70	1.70	2.10	2.50	1.80	8.00	9.20	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	9	14	1.50	1.50	1.90	3.10	1.80	8.00	9.30	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	9	18	1.40	1.40	1.70	3.50	1.80	8.00	9.50	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	7	12	12	1.45	1.45	2.55	2.55	1.80	8.00	9.20	0.65	2.55	3.80	2.85	11.31	16.80	3.14	B
	7	7	12	14	1.40	1.40	2.40	2.80	1.80	8.00	9.30	0.65	2.55	3.80	2.85	11.31	16.80	3.14	B
	7	9	9	9	1.70	2.10	2.10	2.10	1.80	8.00	9.20	0.65	2.60	3.80	2.85	11.54	16.80	3.08	B
	7	9	9	12	1.60	2.00	2.00	2.40	1.80	8.00	9.20	0.65	2.55	3.80	2.85	11.31	16.80	3.14	B
	7	9	9	14	1.45	1.80	1.80	2.95	1.80	8.00	9.30	0.65	2.55	3.80	2.85	11.31	16.80	3.14	B
	7	9	12	12	1.40	1.70	2.45	2.45	1.80	8.00	9.20	0.65	2.50	3.80	2.85	11.09	16.80	3.20	B
	7	9	12	14	1.30	1.65	2.30	2.75	1.80	8.00	9.30	0.65	2.50	3.80	2.85	11.09	16.80	3.20	B
	9	9	9	9	2.00	2.00	2.00	2.00	1.80	8.00	9.20	0.65	2.55	3.80	2.85	11.31	16.80	3.14	B
	9	9	9	12	1.90	1.90	1.90	2.30	1.80	8.00	9.20	0.65	2.50	3.80	2.85	11.09	16.80	3.20	B
	9	9	9	14	1.70	1.70	1.70	2.90	1.80	8.00	9.30	0.65	2.50	3.80	2.85	11.09	16.80	3.20	B
	9	9	12	12	1.65	1.65	2.05	2.65	1.80	8.00	9.40	0.65	2.50	3.80	2.85	11.09	16.80	3.20	B

HEATING

Co mb.	Combinations				Rated capacity Output/kW (Nom. heating)				total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	14	—	—	2.30	4.60	—	—	1.20	6.90	7.50	0.50	2.80	3.80	2.15	12.42	16.80	2.46	F
	7	18	—	—	2.30	5.50	—	—	1.20	7.80	8.40	0.50	2.90	3.80	2.15	12.87	16.80	2.69	E
	9	12	—	—	2.90	3.80	—	—	1.20	6.70	7.30	0.50	2.90	3.80	2.15	12.87	16.80	2.31	G
	9	14	—	—	2.90	4.60	—	—	1.20	7.50	8.20	0.50	3.00	3.80	2.15	13.31	16.80	2.50	F
	9	18	—	—	2.90	5.50	—	—	1.20	8.40	9.20	0.50	3.00	3.80	2.15	13.31	16.80	2.80	D
	12	12	—	—	3.80	3.80	—	—	1.20	7.60	8.20	0.50	2.95	3.80	2.15	13.09	16.80	2.58	F
	12	14	—	—	3.80	4.60	—	—	1.20	8.40	9.10	0.50	2.90	3.80	2.15	12.87	16.80	2.90	D
	12	18	—	—	3.80	5.50	—	—	1.20	9.30	10.20	0.50	3.10	3.80	2.15	13.75	16.80	3.00	C
	14	14	—	—	4.60	4.60	—	—	1.20	9.20	10.20	0.55	3.00	3.80	2.50	13.31	16.80	3.07	C
	14	18	—	—	4.60	5.40	—	—	1.20	10.00	10.50	0.55	3.00	3.80	2.50	13.31	16.80	3.33	C
TRI (1x3)	18	18	—	—	5.00	5.00	—	—	1.20	10.00	11.00	0.55	3.00	3.80	2.50	13.31	16.80	3.33	C
	7	7	7	—	2.30	2.30	2.30	—	1.50	6.90	7.80	0.55	2.85	3.80	2.50	12.64	16.80	2.42	F
	7	7	9	—	2.30	2.30	2.90	—	1.50	7.50	8.40	0.55	2.85	3.80	2.50	12.64	16.80	2.63	E
	7	7	12	—	2.30	2.30	3.80	—	1.50	8.40	9.30	0.55	2.85	3.80	2.50	12.64	16.80	2.95	D
	7	7	14	—	2.30	2.30	4.60	—	1.50	9.20	10.20	0.55	2.80	3.80	2.50	12.42	16.80	3.29	C
	7	7	18	—	2.30	2.30	5.40	—	1.50	10.00	10.50	0.55	2.80	3.80	2.50	12.42	16.80	3.57	B
	7	9	9	—	2.30	2.90	2.90	—	1.50	8.10	10.50	0.55	2.90	3.80	2.50	12.87	16.80	2.79	E
	7	9	12	—	2.30	2.90	3.80	—	1.50	9.00	10.50	0.55	2.90	3.80	2.50	12.87	16.80	3.10	C
	7	9	14	—	2.30	2.90	4.60	—	1.50	9.80	10.50	0.55	2.80	3.80	2.50	12.42	16.80	3.50	B
	7	9	18	—	2.15	2.70	5.15	—	1.50	10.00	11.00	0.55	2.85	3.80	2.50	12.64	16.80	3.51	B
	7	12	12	—	2.30	3.80	3.80	—	1.50	9.90	10.80	0.55	2.90	3.80	2.50	12.87	16.80	3.41	B
	7	12	14	—	2.15	3.55	4.30	—	1.50	10.00	11.00	0.55	2.90	3.80	2.50	12.87	16.80	3.45	B
	7	12	18	—	2.00	3.25	4.75	—	1.50	10.00	11.00	0.55	2.90	3.80	2.50	12.87	16.80	3.45	B
	7	14	14	—	2.00	4.00	4.00	—	1.50	10.00	11.00	0.55	2.85	3.80	2.50	12.64	16.80	3.51	B
	7	14	18	—	1.90	3.70	4.40	—	1.50	10.00	11.00	0.55	2.85	3.80	2.50	12.64	16.80	3.51	B
	9	9	9	—	2.90	2.90	2.90	—	1.50	8.70	10.50	0.55	2.90	3.80	2.50	12.87	16.80	3.00	C
	9	9	12	—	2.90	2.90	3.80	—	1.50	9.60	10.50	0.55	2.90	3.80	2.50	12.87	16.80	3.31	C
	9	9	14	—	2.75	2.75	4.50	—	1.50	10.00	10.50	0.55	2.85	3.80	2.50	12.64	16.80	3.51	B
	9	9	18	—	2.50	2.50	5.00	—	1.50	10.00	11.50	0.55	2.80	3.80	2.50	12.42	16.80	3.57	B
	9	12	12	—	2.80	3.60	3.60	—	1.50	10.00	11.50	0.55	2.80	3.80	2.50	12.42	16.80	3.57	B
	9	12	14	—	2.55	3.35	4.10	—	1.50	10.00	11.50	0.55	2.80	3.80	2.50	12.42	16.80	3.57	B
	9	12	18	—	2.40	3.10	4.50	—	1.50	10.00	11.50	0.55	2.85	3.80	2.50	12.64	16.80	3.51	B
	9	14	14	—	2.40	3.80	3.80	—	1.50	10.00	11.50	0.55	2.90	3.80	2.50	12.87	16.80	3.45	B
	9	14	18	—	2.25	3.55	4.20	—	1.50	10.00	11.50	0.55	2.90	3.80	2.50	12.87	16.80	3.45	B
	12	12	12	—	3.35	3.35	3.35	—	1.50	10.05	11.50	0.55	2.95	3.80	2.50	13.09	16.80	3.41	B
	12	12	14	—	3.10	3.10	3.80	—	1.50	10.00	11.50	0.55	2.90	3.80	2.50	12.87	16.80	3.45	B
	12	12	18	—	2.90	2.90	4.20	—	1.50	10.00	11.50	0.55	2.90	3.80	2.50	12.87	16.80	3.45	B
	12	14	14	—	2.90	3.55	3.55	—	1.50	10.00	11.50	0.55	2.90	3.80	2.50	12.87	16.80	3.45	B
QUADR(1x4)	7	7	7	7	2.30	2.30	2.30	2.30	1.80	9.20	10.50	0.65	2.90	3.80	2.85	12.87	16.80	3.17	C
	7	7	7	9	2.30	2.30	2.30	2.90	1.80	9.80	10.50	0.65	2.90	3.80	2.85	12.87	16.80	3.38	C
	7	7	7	12	2.15	2.15	2.15	3.55	1.80	10.00	11.50	0.65	2.85	3.80	2.85	12.64	16.80	3.51	B
	7	7	7	14	2.00	2.00	2.00	4.00	1.80	10.00	11.50	0.65	2.85	3.80	2.85	12.64	16.80	3.51	B
	7	7	7	18	1.85	1.85	1.85	4.45	1.80	10.00	11.50	0.65	2.85	3.80	2.85	12.64	16.80	3.51	B
	7	7	9	9	2.20	2.20	2.80	2.80	1.80	10.00	11.50	0.65	2.90	3.80	2.85	12.87	16.80	3.45	B
	7	7	9	12	2.05	2.05	2.55	3.35	1.80	10.00	11.50	0.65	2.90	3.80	2.85	12.87	16.80	3.45	B
	7	7	9	14	1.90	1.90	2.40	3.80	1.80	10.00	11.50	0.65	2.85	3.80	2.85	12.64	16.80	3.51	B
	7	7	9	18	1.75	1.75	2.20	4.30	1.80	10.00	11.50	0.65	2.85	3.80	2.85	12.64	16.80	3.51	B
	7	7	12	12	1.90	1.90	3.10	3.10	1.80	10.00	11.50	0.65	2.90	3.80	2.85	12.87	16.80	3.45	B
	7	7	12	14	1.75	1.75	2.90	3.60	1.80	10.00	11.50	0.65	2.85	3.80	2.85	12.64	16.80	3.51	B
	7	9	9	9	2.10	2.65	2.65	2.65	1.80	10.05	11.50	0.65	2.90	3.80	2.85	12.87	16.80	3.47	B
	7	9	9	12	1.95	2.45	2.45	3.15	1.80	10.00	11.50	0.65	2.90	3.80	2.85	12.87	16.80	3.45	B
	7	9	9	14	1.80	2.25	2.25	3.70	1.80	10.00	11.50	0.65	2.85	3.80	2.85	12.64	16.80	3.51	B
	7	9	12	12	1.95	2.25	2.90	2.90	1.80	10.00	11.50	0.65	2.80	3.80	2.85	12.42	16.80	3.57	B
	7	9	12	14	1.70	2.15	2.80	3.35	1.80	10.00	11.50	0.65	2.80	3.80	2.85	12.42	16.80	3.57	B
	9	9	9	9	2.50	2.50	2.50	2.50	1.80	10.00	11.50	0.65	2.75	3.80	2.85	12.20	16.80	3.64	A
	9	9	9	12	2.30	2.30	2.30	3.10	1.80	10.00	11.50	0.65	2.75	3.80	2.85	12.20	16.80	3.64	A
	9	9	9	14	2.20	2.20	2.20	3.40	1.80	10.00	11.50	0.65	2.75	3.80	2.85	12.20	16.80	3.64	A
	9	9	12	12	2.15	2.15	2.85	2.85	1.80	10.00	11.50	0.65	2.70	3.80	2.85	11.98	16.80	3.70	A

AU342XHERA combination and the data

COOLING

Co mb	Combinations				Rated capacity Output/kW (Nom. cooling)				total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	18	—	—	2.00	5.00	—	—	1.00	7.00	7.50	0.50	2.85	4.00	2.15	12.64	18.10	2.46	E
	9	18	—	—	2.50	5.00	—	—	1.00	7.50	8.00	0.50	2.90	4.00	2.15	12.87	18.10	2.59	E
	12	14	—	—	3.50	4.10	—	—	1.00	7.60	8.10	0.50	2.90	4.00	2.15	12.87	18.10	2.62	D
	12	18	—	—	3.50	5.00	—	—	1.00	8.50	9.00	0.50	3.30	4.00	2.15	14.64	18.10	2.58	E
	14	14	—	—	4.10	4.10	—	—	1.00	8.20	8.80	0.50	3.30	4.00	2.15	14.64	18.10	2.48	E
	14	18	—	—	4.10	5.00	—	—	1.00	9.10	9.70	0.50	3.50	4.00	2.15	15.53	18.10	2.60	D
	18	18	—	—	5.00	5.00	—	—	1.00	10.00	10.50	0.50	3.50	4.00	2.15	15.53	18.10	2.86	C
TRI (1x3)	7	7	12	—	2.00	2.00	3.50	—	1.50	7.50	8.10	0.55	3.10	4.00	2.50	13.75	18.10	2.42	E
	7	7	14	—	2.00	2.00	4.10	—	1.50	8.10	8.80	0.55	3.20	4.00	2.50	14.20	18.10	2.53	E
	7	7	18	—	2.00	2.00	5.00	—	1.50	9.00	9.80	0.55	3.25	4.00	2.50	14.42	18.10	2.77	D
	7	9	9	—	2.00	2.50	2.50	—	1.50	7.00	7.60	0.55	3.10	4.00	2.50	13.75	18.10	2.26	F
	7	9	12	—	2.00	2.50	3.50	—	1.50	8.00	8.60	0.55	3.10	4.00	2.50	13.75	18.10	2.58	E
	7	9	14	—	2.00	2.50	4.10	—	1.50	8.60	9.30	0.55	3.15	4.00	2.50	13.98	18.10	2.73	D
	7	9	18	—	2.00	2.50	5.00	—	1.50	9.50	10.20	0.55	3.40	4.00	2.50	15.08	18.10	2.79	D
	7	12	12	—	2.00	3.50	3.50	—	1.50	9.00	9.60	0.55	3.40	4.00	2.50	15.08	18.10	2.65	D
	7	12	14	—	2.00	3.50	4.10	—	1.50	9.60	10.20	0.55	3.40	4.00	2.50	15.08	18.10	2.82	C
	7	12	18	—	1.90	3.30	4.80	—	1.50	10.00	10.50	0.55	3.40	4.00	2.50	15.08	18.10	2.94	C
	9	9	9	—	2.50	2.50	2.50	—	1.50	7.50	8.10	0.55	3.40	4.00	2.50	15.08	18.10	2.21	F
	9	9	12	—	2.50	2.50	3.50	—	1.50	8.50	9.10	0.55	3.40	4.00	2.50	15.08	18.10	2.50	E
	9	9	14	—	2.50	2.50	4.10	—	1.50	9.10	9.80	0.55	3.35	4.00	2.50	14.86	18.10	2.72	D
	9	9	18	—	2.50	2.50	5.00	—	1.50	10.00	10.50	0.55	3.35	4.00	2.50	14.86	18.10	2.99	C
	9	12	12	—	2.50	3.50	3.50	—	1.50	9.50	10.20	0.55	3.40	4.00	2.50	15.08	18.10	2.79	D
	9	12	14	—	2.45	3.45	4.10	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
	9	12	18	—	2.30	3.20	4.50	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
QUADRI(1x4)	12	12	12	—	3.33	3.33	3.33	—	1.50	10.00	10.50	0.55	3.40	4.00	2.50	15.08	18.10	2.94	C
	12	12	14	—	3.15	3.15	3.70	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
	12	12	18	—	2.90	2.90	4.20	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
	7	7	7	7	2.00	2.00	2.00	2.00	1.80	8.00	8.80	0.65	3.25	4.00	2.85	14.42	18.10	2.46	E
	7	7	7	9	2.00	2.00	2.00	2.50	1.80	8.50	9.30	0.65	3.25	4.00	2.85	14.42	18.10	2.62	D
	7	7	7	12	2.00	2.00	2.00	3.50	1.80	9.50	10.30	0.65	3.25	4.00	2.85	14.42	18.10	2.92	C
	7	7	7	14	1.95	1.95	1.95	4.10	1.80	9.95	10.80	0.65	3.30	4.00	2.85	14.64	18.10	3.02	B
	7	7	7	18	1.85	1.85	1.85	4.45	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	9	9	2.00	2.00	2.50	2.50	1.80	9.00	9.80	0.65	3.25	4.00	2.85	14.42	18.10	2.77	D
	7	7	9	12	2.00	2.00	2.50	3.50	1.80	10.00	10.50	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	7	9	14	1.85	1.85	2.35	3.95	1.80	10.00	10.80	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	9	18	1.75	1.75	2.15	4.35	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	12	12	1.80	1.80	3.20	3.20	1.80	10.00	10.80	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	7	12	14	1.70	1.70	3.00	3.60	1.80	10.00	10.90	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	12	18	1.60	1.60	2.80	4.00	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	9	9	9	2.00	2.50	2.50	2.50	1.80	9.50	10.30	0.65	3.25	4.00	2.85	14.42	18.10	2.92	C
	7	9	9	12	1.90	2.40	2.40	3.30	1.80	10.00	10.80	0.65	3.28	4.00	2.85	14.55	18.10	3.05	B
	7	9	9	14	1.80	2.25	2.25	3.70	1.80	10.00	10.90	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	9	9	18	1.70	2.10	2.10	4.10	1.80	10.00	11.00	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	9	12	12	1.75	2.15	3.05	3.05	1.80	10.00	10.80	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	9	12	14	1.65	2.05	2.90	3.40	1.80	10.00	10.90	0.65	3.22	4.00	2.85	14.29	18.10	3.11	B
	7	9	12	18	1.55	1.95	2.70	3.80	1.80	10.00	11.00	0.65	3.20	4.00	2.85	14.20	18.10	3.13	B
	7	12	12	12	1.60	2.80	2.80	2.80	1.80	10.00	11.00	0.65	3.22	4.00	2.85	14.29	18.10	3.11	B
	7	12	12	14	1.55	2.70	2.70	3.05	1.80	10.00	11.00	0.65	3.22	4.00	2.85	14.29	18.10	3.11	B
	9	9	9	9	2.50	2.50	2.50	2.50	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	9	9	9	12	2.30	2.30	2.30	3.10	1.80	10.00	11.00	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	9	9	9	14	2.15	2.15	2.15	3.55	1.80	10.00	11.00	0.65	3.24	4.00	2.85	14.37	18.10	3.09	B
	9	9	9	18	2.00	2.00	2.00	4.00	1.80	10.00	11.00	0.65	3.23	4.00	2.85	14.33	18.10	3.10	B
	9	9	12	12	2.10	2.10	2.90	2.90	1.80	10.00	11.00	0.65	3.20	4.00	2.85	14.20	18.10	3.13	B
	9	9	12	14	2.00	2.00	2.75	3.25	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B
	9	9	12	18	1.85	1.85	2.60	3.70	1.80	10.00	11.00	0.65	3.15	4.00	2.85	13.98	18.10	3.17	B
	9	12	12	12	1.90	2.70	2.70	2.70	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B
	9	12	12	14	1.85	2.50	2.50	3.15	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B
	12	12	12	12	2.50	2.50	2.50	2.50	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B

HEATING

Co mb.	Combinations				Rated capacity Output/kW (Nom. heating)				total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	18	—	—	2.30	5.50	—	—	1.20	7.80	7.50	0.50	2.95	4.00	2.15	12.64	18.10	2.64	E
	9	18	—	—	2.90	5.50	—	—	1.20	8.40	8.40	0.50	3.00	4.00	2.15	12.87	18.10	2.80	D
	12	14	—	—	3.80	4.60	—	—	1.20	8.40	7.30	0.50	3.00	4.00	2.15	12.87	18.10	2.80	D
	12	18	—	—	3.80	5.50	—	—	1.20	9.30	8.20	0.50	3.30	4.00	2.15	14.64	18.10	2.82	D
	14	14	—	—	4.60	4.60	—	—	1.20	9.20	9.20	0.50	3.30	4.00	2.15	14.64	18.10	2.79	E
	14	18	—	—	4.60	5.50	—	—	1.20	10.10	8.20	0.50	3.45	4.00	2.15	15.53	18.10	2.93	D
TRI (1x3)	18	18	—	—	5.50	5.50	—	—	1.20	11.00	9.10	0.50	3.45	4.00	2.15	15.53	18.10	3.19	C
	7	7	12	—	2.30	2.30	3.80	—	1.20	8.40	10.20	0.55	2.95	4.00	2.50	13.75	18.10	2.85	D
	7	7	14	—	2.30	2.30	4.60	—	1.20	9.20	10.20	0.55	2.90	4.00	2.50	14.20	18.10	3.17	C
	7	7	18	—	2.30	2.30	5.50	—	1.20	10.10	10.50	0.55	2.95	4.00	2.50	14.42	18.10	3.42	B
	7	9	9	—	2.30	2.90	2.90	—	1.20	8.10	11.00	0.55	2.95	4.00	2.50	13.75	18.10	2.75	E
	7	9	12	—	2.30	2.90	3.80	—	1.50	9.00	7.80	0.55	2.95	4.00	2.50	13.75	18.10	3.05	C
	7	9	14	—	2.30	2.90	4.60	—	1.50	9.80	8.40	0.55	3.00	4.00	2.50	13.98	18.10	3.27	C
	7	9	18	—	2.30	2.90	5.50	—	1.50	10.70	9.30	0.55	3.05	4.00	2.50	15.08	18.10	3.51	B
	7	12	12	—	2.30	3.80	3.80	—	1.50	9.90	10.20	0.55	2.95	4.00	2.50	15.08	18.10	3.36	C
	7	12	14	—	2.30	3.80	4.60	—	1.50	10.70	10.50	0.55	3.00	4.00	2.50	15.08	18.10	3.57	B
	7	12	18	—	2.10	3.60	5.30	—	1.50	11.00	10.50	0.55	3.05	4.00	2.50	15.08	18.10	3.61	A
	9	9	9	—	2.90	2.90	2.90	—	1.50	8.70	10.80	0.55	3.00	4.00	2.50	15.08	18.10	2.90	D
	9	9	12	—	2.90	2.90	3.80	—	1.50	9.60	11.00	0.55	3.05	4.00	2.50	15.08	18.10	3.15	C
	9	9	14	—	2.90	2.90	4.60	—	1.50	10.40	11.00	0.55	3.10	4.00	2.50	14.86	18.10	3.35	C
	9	9	18	—	2.80	2.80	5.40	—	1.50	11.00	11.00	0.55	3.10	4.00	2.50	14.86	18.10	3.55	B
	9	12	12	—	2.90	3.80	3.80	—	1.50	10.50	11.00	0.55	3.05	4.00	2.50	15.08	18.10	3.44	B
	9	12	14	—	2.70	3.80	4.50	—	1.50	11.00	11.00	0.55	3.10	4.00	2.50	15.00	18.10	3.55	B
	9	12	18	—	2.55	3.55	4.90	—	1.50	11.00	10.50	0.55	3.15	4.00	2.50	15.00	18.10	3.49	B
	12	12	12	—	3.66	3.66	3.66	—	1.50	11.00	11.50	0.55	3.45	4.00	2.50	15.08	18.10	3.19	C
	12	12	14	—	3.45	3.45	4.10	—	1.50	11.00	11.50	0.55	3.40	4.00	2.50	15.00	18.10	3.24	C
	12	12	18	—	3.20	3.20	4.60	—	1.50	11.00	11.50	0.55	3.40	4.00	2.50	15.00	18.10	3.24	C
QUADR(1x4)	7	7	7	7	2.30	2.30	2.30	2.30	1.50	9.20	11.50	0.65	3.25	4.00	2.85	14.42	18.10	2.83	D
	7	7	7	9	2.30	2.30	2.30	2.90	1.50	9.80	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.02	C
	7	7	7	12	2.30	2.30	2.30	3.80	1.80	10.70	10.50	0.65	3.25	4.00	2.85	14.42	18.10	3.29	C
	7	7	7	14	2.20	2.20	2.20	4.40	1.80	11.00	10.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	7	18	2.05	2.05	2.05	4.85	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	9	9	2.30	2.30	2.90	2.90	1.80	10.40	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.20	C
	7	7	9	12	2.25	2.25	2.85	3.65	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	7	9	14	2.10	2.10	2.65	4.15	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	9	18	1.95	1.95	2.35	4.75	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	12	12	2.00	2.00	3.50	3.50	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	7	12	14	1.90	1.90	3.30	3.90	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	12	18	1.75	1.75	3.10	4.40	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	9	9	9	2.30	2.90	2.90	2.90	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	9	12	2.10	2.65	2.65	3.60	1.80	11.00	11.50	0.65	3.28	4.00	2.85	14.55	18.10	3.35	C
	7	9	9	14	2.00	2.50	2.50	4.00	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	9	18	1.85	2.30	2.30	4.55	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	12	12	2.00	2.30	3.35	3.35	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	12	14	1.80	2.25	3.20	3.75	1.80	11.00	11.50	0.65	3.22	4.00	2.85	14.29	18.10	3.42	B
	7	9	12	18	1.70	2.15	2.95	4.20	1.80	11.00	11.50	0.65	3.20	4.00	2.85	14.20	18.10	3.44	B
	7	12	12	12	1.70	3.10	3.10	3.10	1.80	11.00	11.50	0.65	3.22	4.00	2.85	14.29	18.10	3.42	B
	7	12	12	14	1.70	3.00	3.00	3.30	1.80	11.00	11.50	0.65	3.22	4.00	2.85	14.29	18.10	3.42	B
	9	9	9	9	2.75	2.75	2.75	2.75	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	9	9	9	12	2.55	2.55	2.55	3.35	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	9	9	9	14	2.35	2.35	2.35	3.95	1.80	11.00	11.50	0.65	3.24	4.00	2.85	14.37	18.10	3.40	C
	9	9	9	18	2.20	2.20	2.20	4.40	1.80	11.00	11.50	0.65	3.23	4.00	2.85	14.33	18.10	3.41	B
	9	9	12	12	2.30	2.30	3.20	3.20	1.80	11.00	11.50	0.65	3.20	4.00	2.85	14.20	18.10	3.44	B
	9	9	12	14	2.20	2.20	3.00	3.60	1.80	11.00	11.50	0.65	3.17	4.00	2.85	14.06	18.10	3.47	B
	9	9	12	18	2.05	2.05	2.85	4.05	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B
	9	12	12	12	2.00	3.00	3.00	3.00	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B
	9	12	12	14	2.00	2.75	2.75	3.50	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B
	12	12	12	12	2.75	2.75	2.75	2.75	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B

AU362XHERA combination and the data

COOLING

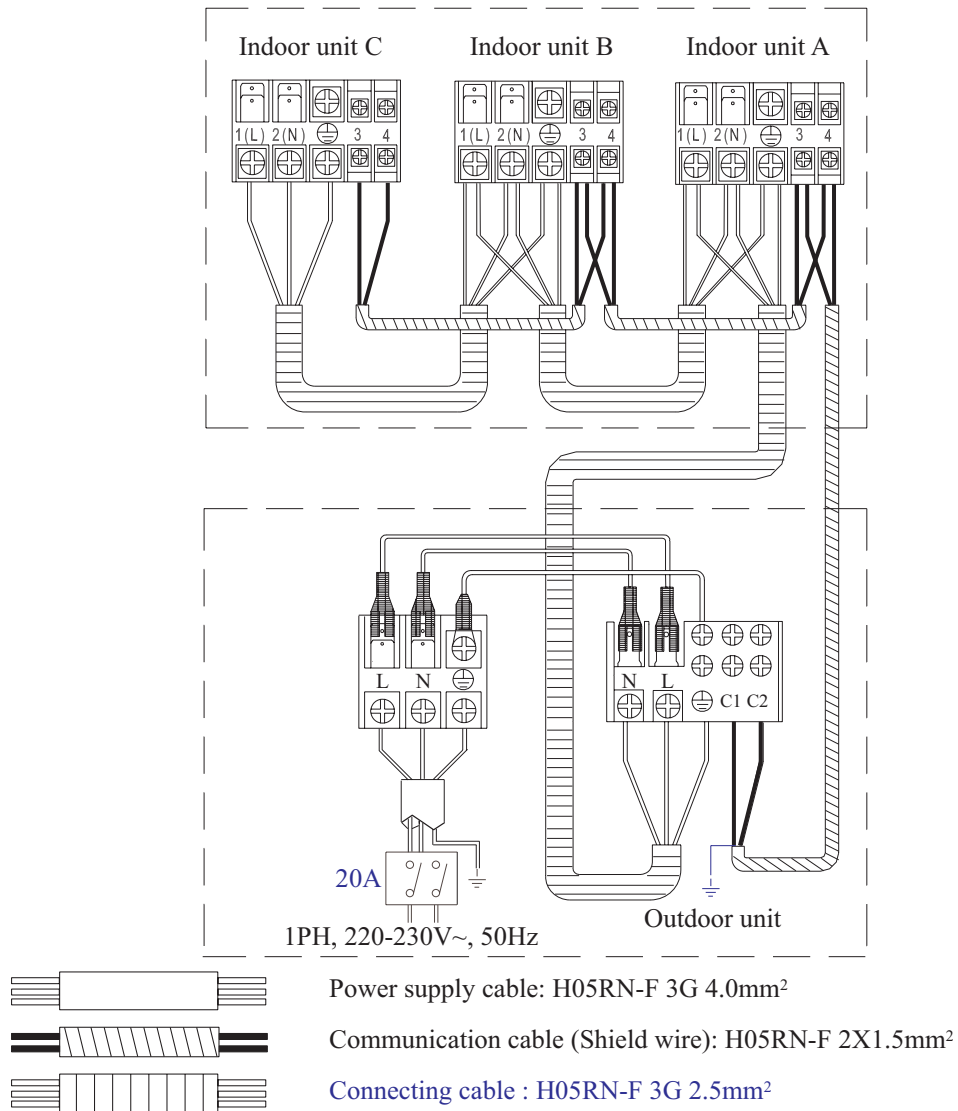
Com b.	Combinations					Rated capacity Output/kW (Nom. cooling)					total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	18	—	—	—	2.00	5.00	—	—	—	1.00	7.00	7.50	0.50	2.85	4.00	2.15	12.64	18.10	2.46	E
	9	18	—	—	—	2.50	5.00	—	—	—	1.00	7.50	8.00	0.50	2.90	4.00	2.15	12.87	18.10	2.59	E
	12	14	—	—	—	3.50	4.10	—	—	—	1.00	7.60	8.10	0.50	2.90	4.00	2.15	12.87	18.10	2.62	D
	12	18	—	—	—	3.50	5.00	—	—	—	1.00	8.50	9.00	0.50	3.30	4.00	2.15	14.64	18.10	2.58	E
	14	14	—	—	—	4.10	4.10	—	—	—	1.00	8.20	8.80	0.50	3.30	4.00	2.15	14.64	18.10	2.48	E
	14	18	—	—	—	4.10	5.00	—	—	—	1.00	9.10	9.70	0.50	3.50	4.00	2.15	15.53	18.10	2.60	E
TRI (1x3)	18	18	—	—	—	5.00	5.00	—	—	—	1.00	10.00	10.50	0.50	3.50	4.00	2.15	15.53	18.10	2.86	C
	7	7	12	—	—	2.00	2.00	3.50	—	—	1.50	7.50	8.10	0.55	3.10	4.00	2.50	13.75	18.10	2.42	E
	7	7	14	—	—	2.00	2.00	4.10	—	—	1.50	8.10	8.80	0.55	3.20	4.00	2.50	14.20	18.10	2.53	E
	7	7	18	—	—	2.00	2.00	5.00	—	—	1.50	9.00	9.80	0.55	3.25	4.00	2.50	14.42	18.10	2.77	D
	7	9	9	—	—	2.00	2.50	2.50	—	—	1.50	7.00	7.60	0.55	3.10	4.00	2.50	13.75	18.10	2.26	F
	7	9	12	—	—	2.00	2.50	3.50	—	—	1.50	8.00	8.60	0.55	3.10	4.00	2.50	13.75	18.10	2.58	E
	7	9	14	—	—	2.00	2.50	4.10	—	—	1.50	8.60	9.30	0.55	3.15	4.00	2.50	13.98	18.10	2.73	D
	7	9	18	—	—	2.00	2.50	5.00	—	—	1.50	9.50	10.20	0.55	3.40	4.00	2.50	15.08	18.10	2.79	D
	7	12	12	—	—	2.00	3.50	3.50	—	—	1.50	9.00	9.60	0.55	3.40	4.00	2.50	15.08	18.10	2.65	D
	7	12	14	—	—	2.00	3.50	4.10	—	—	1.50	9.60	10.20	0.55	3.40	4.00	2.50	15.08	18.10	2.82	C
	7	12	18	—	—	1.90	3.30	4.80	—	—	1.50	10.00	10.50	0.55	3.40	4.00	2.50	15.08	18.10	2.94	C
	9	9	9	—	—	2.50	2.50	2.50	—	—	1.50	7.50	8.10	0.55	3.40	4.00	2.50	15.08	18.10	2.21	F
	9	9	12	—	—	2.50	2.50	3.50	—	—	1.50	8.50	9.10	0.55	3.40	4.00	2.50	15.08	18.10	2.50	E
	9	9	14	—	—	2.50	2.50	4.10	—	—	1.50	9.10	9.80	0.55	3.35	4.00	2.50	14.86	18.10	2.72	D
	9	9	18	—	—	2.50	2.50	5.00	—	—	1.50	10.00	10.50	0.55	3.35	4.00	2.50	14.86	18.10	2.99	C
	9	12	12	—	—	2.50	3.50	3.50	—	—	1.50	9.50	10.20	0.55	3.40	4.00	2.50	15.08	18.10	2.79	D
	9	12	14	—	—	2.45	3.45	4.10	—	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
	9	12	18	—	—	2.30	3.20	4.50	—	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
	12	12	12	—	—	3.33	3.33	3.33	—	—	1.50	10.00	10.50	0.55	3.40	4.00	2.50	15.08	18.10	2.94	C
	12	12	14	—	—	3.15	3.15	3.70	—	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
	12	12	18	—	—	2.90	2.90	4.20	—	—	1.50	10.00	10.50	0.55	3.38	4.00	2.50	15.00	18.10	2.96	C
QUADRI(1x4)	7	7	7	7	—	2.00	2.00	2.00	2.00	—	1.80	8.00	8.80	0.65	3.25	4.00	2.85	14.42	18.10	2.46	E
	7	7	7	9	—	2.00	2.00	2.00	2.50	—	1.80	8.50	9.30	0.65	3.25	4.00	2.85	14.42	18.10	2.62	D
	7	7	7	12	—	2.00	2.00	2.00	3.50	—	1.80	9.50	10.30	0.65	3.25	4.00	2.85	14.42	18.10	2.92	C
	7	7	7	14	—	1.95	1.95	1.95	4.10	—	1.80	9.95	10.80	0.65	3.30	4.00	2.85	14.64	18.10	3.02	B
	7	7	7	18	—	1.85	1.85	1.85	4.45	—	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	9	9	—	2.00	2.00	2.50	2.50	—	1.80	9.00	9.80	0.65	3.25	4.00	2.85	14.42	18.10	2.77	D
	7	7	9	12	—	2.00	2.00	2.50	3.50	—	1.80	10.00	10.50	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	7	9	14	—	1.85	1.85	2.35	3.95	—	1.80	10.00	10.80	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	9	18	—	1.75	1.75	2.15	4.35	—	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	12	12	—	1.80	1.80	3.20	3.20	—	1.80	10.00	10.80	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	7	12	14	—	1.70	1.70	3.00	3.60	—	1.80	10.00	10.90	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	7	12	18	—	1.60	1.60	2.80	4.00	—	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	7	9	9	9	—	2.00	2.50	2.50	2.50	—	1.80	9.50	10.30	0.65	3.25	4.00	2.85	14.42	18.10	2.92	C
	7	9	9	12	—	1.90	2.40	2.40	3.30	—	1.80	10.00	10.80	0.65	3.28	4.00	2.85	14.55	18.10	3.05	B
	7	9	9	14	—	1.80	2.25	2.25	3.70	—	1.80	10.00	10.90	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	9	9	18	—	1.70	2.10	2.10	4.10	—	1.80	10.00	11.00	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	9	12	12	—	1.75	2.15	3.05	3.05	—	1.80	10.00	10.80	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	7	9	12	14	—	1.65	2.05	2.90	3.40	—	1.80	10.00	10.90	0.65	3.22	4.00	2.85	14.29	18.10	3.11	B
	7	9	12	18	—	1.55	1.95	2.70	3.80	—	1.80	10.00	11.00	0.65	3.20	4.00	2.85	14.20	18.10	3.13	B
	7	12	12	12	—	1.60	2.80	2.80	2.80	—	1.80	10.00	11.00	0.65	3.22	4.00	2.85	14.29	18.10	3.11	B
	7	12	12	14	—	1.55	2.70	2.70	3.05	—	1.80	10.00	11.00	0.65	3.22	4.00	2.85	14.29	18.10	3.11	B
	9	9	9	9	—	2.50	2.50	2.50	2.50	—	1.80	10.00	11.00	0.65	3.30	4.00	2.85	14.64	18.10	3.03	B
	9	9	9	12	—	2.30	2.30	2.30	3.10	—	1.80	10.00	11.00	0.65	3.25	4.00	2.85	14.42	18.10	3.08	B
	9	9	9	14	—	2.15	2.15	2.15	3.55	—	1.80	10.00	11.00	0.65	3.24	4.00	2.85	14.37	18.10	3.09	B
	9	9	9	18	—	2.00	2.00	2.00	4.00	—	1.80	10.00	11.00	0.65	3.23	4.00	2.85	14.33	18.10	3.10	B
	9	9	12	12	—	2.10	2.10	2.90	2.90	—	1.80	10.00	11.00	0.65	3.20	4.00	2.85	14.20	18.10	3.13	B
	9	9	12	14	—	2.00	2.00	2.75	3.25	—	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B
	9	9	12	18	—	1.85	1.85	2.60	3.70	—	1.80	10.00	11.00	0.65	3.15	4.00	2.85	13.98	18.10	3.17	B
	9	12	12	12	—	1.90	2.70	2.70	2.70	—	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B
	9	12	12	14	—	1.85	2.50	2.50	3.15	—	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B
	12	12	12	12	—	2.50	2.50	2.50	2.50	—	1.80	10.00	11.00	0.65	3.17	4.00	2.85	14.06	18.10	3.15	B
Quintuple(1x5)	7	7	7	7	7	2.00	2.00	2.00	2.00	2.00	2.00	10.00	11.00	0.70	3.30	4.00	2.85	13.98	18.10	3.03	B
	7	7	7	7	9	1.90	1.90	1.90	1.90	2.38	2.00	10.00	11.00	0.70	3.28	4.00	2.85	13.98	18.10	3.05	B
	7	7	7	7	12	1.74	1.74	1.74.													

HEATING

Com b.	Combinations					Rated capacity Output/kW (Nom. heating)					total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	ENERGY LABEL
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
BI (1x2)	7	18	—	—	—	2.30	5.50	—	—	—	1.20	7.80	7.50	0.50	2.95	4.00	2.15	12.64	18.10	2.64	E
	9	18	—	—	—	2.90	5.50	—	—	—	1.20	8.40	8.40	0.50	3.00	4.00	2.15	12.87	18.10	2.80	E
	12	14	—	—	—	3.80	4.60	—	—	—	1.20	8.40	7.30	0.50	3.00	4.00	2.15	12.87	18.10	2.80	E
	12	18	—	—	—	3.80	5.50	—	—	—	1.20	9.30	8.20	0.50	3.30	4.00	2.15	14.64	18.10	2.82	D
	14	14	—	—	—	4.60	4.60	—	—	—	1.20	9.20	9.20	0.50	3.30	4.00	2.15	14.64	18.10	2.79	E
	14	18	—	—	—	4.60	5.50	—	—	—	1.20	10.10	8.20	0.50	3.45	4.00	2.15	15.53	18.10	2.93	D
	18	18	—	—	—	5.50	5.50	—	—	—	1.20	11.00	9.10	0.50	3.45	4.00	2.15	15.53	18.10	3.19	C
TRI (1x3)	7	7	12	—	—	2.30	2.30	3.80	—	—	1.20	8.40	10.20	0.55	2.95	4.00	2.50	13.75	18.10	2.85	D
	7	7	14	—	—	2.30	2.30	4.60	—	—	1.20	9.20	10.20	0.55	2.90	4.00	2.50	14.20	18.10	3.17	C
	7	7	18	—	—	2.30	2.30	5.50	—	—	1.20	10.10	10.50	0.55	2.95	4.00	2.50	14.42	18.10	3.42	B
	7	9	9	—	—	2.30	2.90	2.90	—	—	1.20	8.10	11.00	0.55	2.95	4.00	2.50	13.75	18.10	2.75	E
	7	9	12	—	—	2.30	2.90	3.80	—	—	1.50	9.00	7.80	0.55	2.95	4.00	2.50	13.75	18.10	3.05	C
	7	9	14	—	—	2.30	2.90	4.60	—	—	1.50	9.80	8.40	0.55	3.00	4.00	2.50	13.98	18.10	3.27	C
	7	9	18	—	—	2.30	2.90	5.50	—	—	1.50	10.70	9.30	0.55	3.05	4.00	2.50	15.08	18.10	3.51	B
	7	12	12	—	—	2.30	3.80	3.80	—	—	1.50	9.90	10.20	0.55	2.95	4.00	2.50	15.08	18.10	3.36	C
	7	12	14	—	—	2.30	3.80	4.60	—	—	1.50	10.70	10.50	0.55	3.00	4.00	2.50	15.08	18.10	3.57	B
	7	12	18	—	—	2.10	3.60	5.30	—	—	1.50	11.00	10.50	0.55	3.05	4.00	2.50	15.08	18.10	3.61	A
	9	9	9	—	—	2.90	2.90	2.90	—	—	1.50	8.70	10.80	0.55	3.00	4.00	2.50	15.08	18.10	2.90	D
	9	9	12	—	—	2.90	2.90	3.80	—	—	1.50	9.60	11.00	0.55	3.05	4.00	2.50	15.08	18.10	3.15	C
	9	9	14	—	—	2.90	2.90	4.60	—	—	1.50	10.40	11.00	0.55	3.10	4.00	2.50	14.86	18.10	3.35	C
	9	9	18	—	—	2.80	2.80	5.40	—	—	1.50	11.00	11.00	0.55	3.10	4.00	2.50	14.86	18.10	3.55	B
	9	12	12	—	—	2.90	3.80	3.80	—	—	1.50	10.50	11.00	0.55	3.05	4.00	2.50	15.08	18.10	3.44	B
	9	12	14	—	—	2.70	3.80	4.50	—	—	1.50	11.00	11.00	0.55	3.10	4.00	2.50	15.00	18.10	3.55	B
	9	12	18	—	—	2.55	3.55	4.90	—	—	1.50	11.00	10.50	0.55	3.15	4.00	2.50	15.00	18.10	3.49	B
	12	12	12	—	—	3.66	3.66	3.66	—	—	1.50	11.00	11.50	0.55	3.45	4.00	2.50	15.08	18.10	3.19	C
	12	12	14	—	—	3.45	3.45	4.10	—	—	1.50	11.00	11.50	0.55	3.40	4.00	2.50	15.00	18.10	3.24	C
	12	12	18	—	—	3.20	3.20	4.60	—	—	1.50	11.00	11.50	0.55	3.40	4.00	2.50	15.00	18.10	3.24	C
QUADRI(1x4)	7	7	7	7	—	2.30	2.30	2.30	2.30	—	1.50	9.20	11.50	0.65	3.25	4.00	2.85	14.42	18.10	2.83	D
	7	7	7	9	—	2.30	2.30	2.30	2.90	—	1.50	9.80	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.02	C
	7	7	7	12	—	2.30	2.30	2.30	3.80	—	1.80	10.70	10.50	0.65	3.25	4.00	2.85	14.42	18.10	3.29	C
	7	7	7	14	—	2.20	2.20	2.20	4.40	—	1.80	11.00	10.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	7	18	—	2.05	2.05	2.05	4.85	—	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	9	9	—	2.30	2.30	2.90	2.90	—	1.80	10.40	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.20	C
	7	7	9	12	—	2.25	2.25	2.85	3.65	—	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	7	9	14	—	2.10	2.10	2.65	4.15	—	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	9	18	—	1.95	1.95	2.35	4.75	—	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	12	12	—	2.00	2.00	3.50	3.50	—	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	7	12	14	—	1.90	1.90	3.30	3.90	—	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	7	12	18	—	1.75	1.75	3.10	4.40	—	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	7	9	9	9	—	2.30	2.90	2.90	2.90	—	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	9	12	—	2.10	2.65	2.65	3.60	—	1.80	11.00	11.50	0.65	3.28	4.00	2.85	14.55	18.10	3.35	C
	7	9	9	14	—	2.00	2.50	2.50	4.00	—	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	9	18	—	1.85	2.30	2.30	4.55	—	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	12	12	—	2.00	2.30	3.35	3.35	—	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	7	9	12	14	—	1.80	2.25	3.20	3.75	—	1.80	11.00	11.50	0.65	3.22	4.00	2.85	14.29	18.10	3.42	B
	7	9	12	18	—	1.70	2.15	2.95	4.20	—	1.80	11.00	11.50	0.65	3.20	4.00	2.85	14.20	18.10	3.44	B
	7	12	12	12	—	1.70	3.10	3.10	3.10	—	1.80	11.00	11.50	0.65	3.22	4.00	2.85	14.29	18.10	3.42	B
	7	12	12	14	—	1.70	3.00	3.00	3.30	—	1.80	11.00	11.50	0.65	3.22	4.00	2.85	14.29	18.10	3.42	B
	9	9	9	9	—	2.75	2.75	2.75	2.75	—	1.80	11.00	11.50	0.65	3.30	4.00	2.85	14.64	18.10	3.33	C
	9	9	9	12	—	2.55	2.55	2.55	3.35	—	1.80	11.00	11.50	0.65	3.25	4.00	2.85	14.42	18.10	3.38	C
	9	9	9	14	—	2.35	2.35	2.35	3.95	—	1.80	11.00	11.50	0.65	3.24	4.00	2.85	14.37	18.10	3.40	C
	9	9	9	18	—	2.20	2.20	2.20	4.40	—	1.80	11.00	11.50	0.65	3.23	4.00	2.85	14.33	18.10	3.41	B
	9	9	12	12	—	2.30	2.30	3.20	3.20	—	1.80	11.00	11.50	0.65	3.20	4.00	2.85	14.20	18.10	3.44	B
	9	9	12	14	—	2.20	2.20	3.00	3.60	—	1.80	11.00	11.50	0.65	3.17	4.00	2.85	14.06	18.10	3.47	B
	9	9	12	18	—	2.05	2.05	2.85	4.05	—	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B
9	12	12	12	—	2.00	3.00	3.00	3.00	—	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B	
9	12	12	14	—	2.00	2.75	2.75	3.50	—	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B	
12	12	12	12	—	2.75	2.75	2.75	2.75	—	1.80	11.00	11.50	0.65	3.15	4.00	2.85	13.98	18.10	3.49	B	
Quintuple(1x5)	7	7	7	7	7	2.20	2.20	2.20	2.20	2.20	2.10	11.00	11.50	0.70	3.30	4.00	2.85	13.98	18.10	3.33	C
	7	7	7	7	9	2.09	2.09	2.09	2.09	2.64	2.10	11.00	11.50	0.70	3.29	4.00	2.85	13.98	18.10	3.34	C
	7	7	7	7	12																

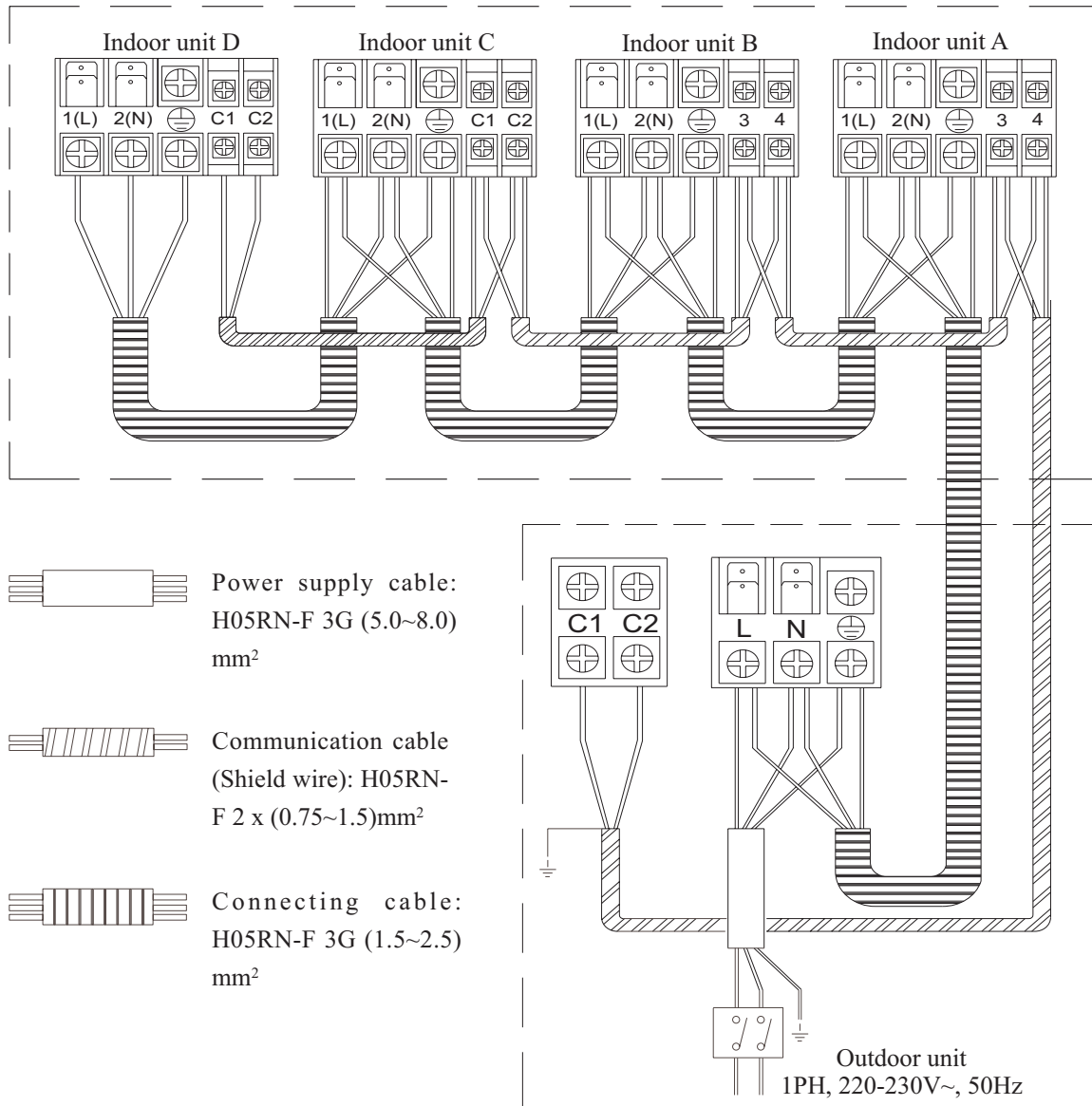
4.2. Wiring connection

AU18-222XFERA



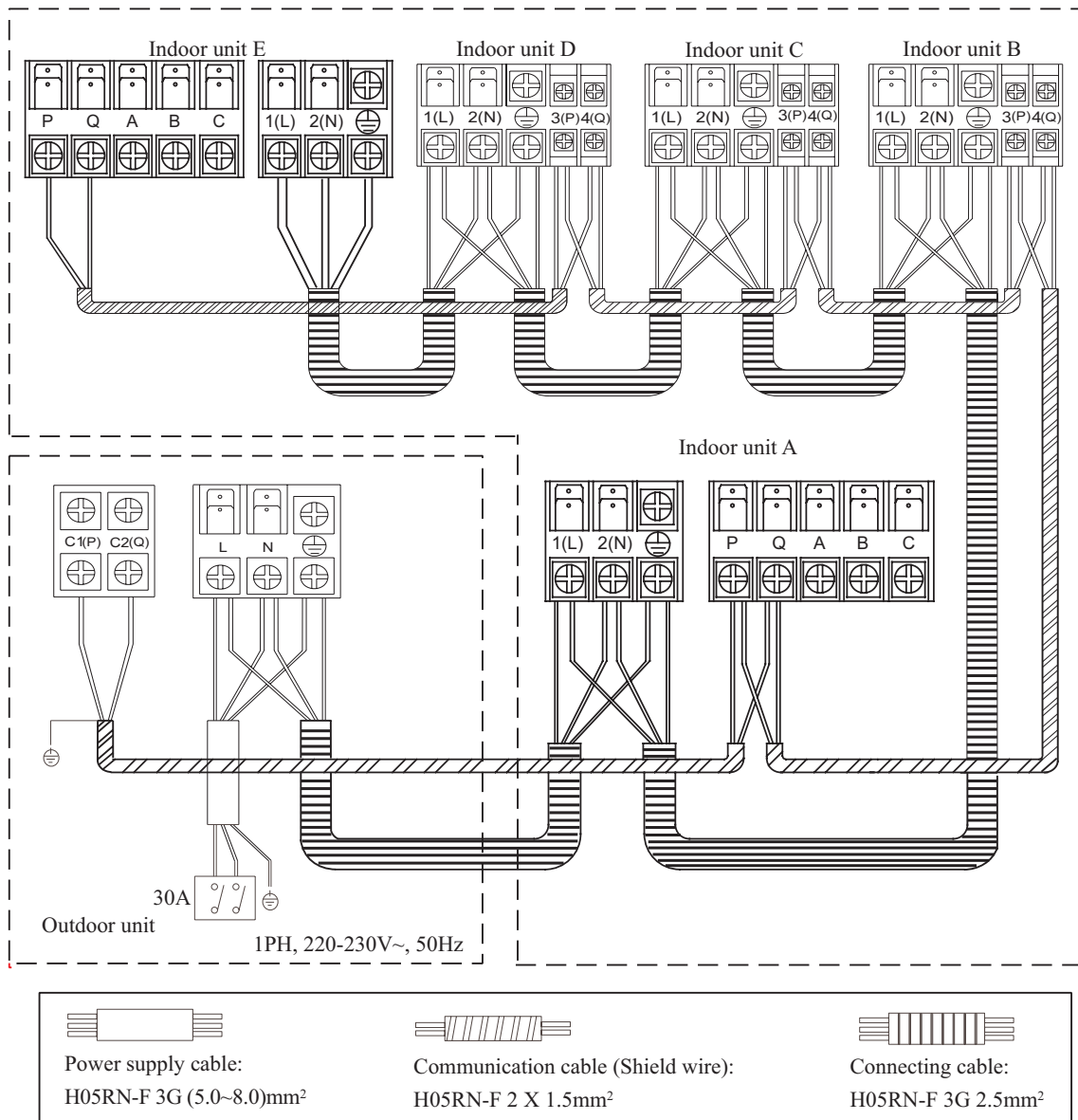
AU25-342X*ERA

Example wiring diagram.



- Please refer to the indoor unit installation manual to find detailly how to set and check the communication address.
- Incorrect address setting will cause abnormal to the system.

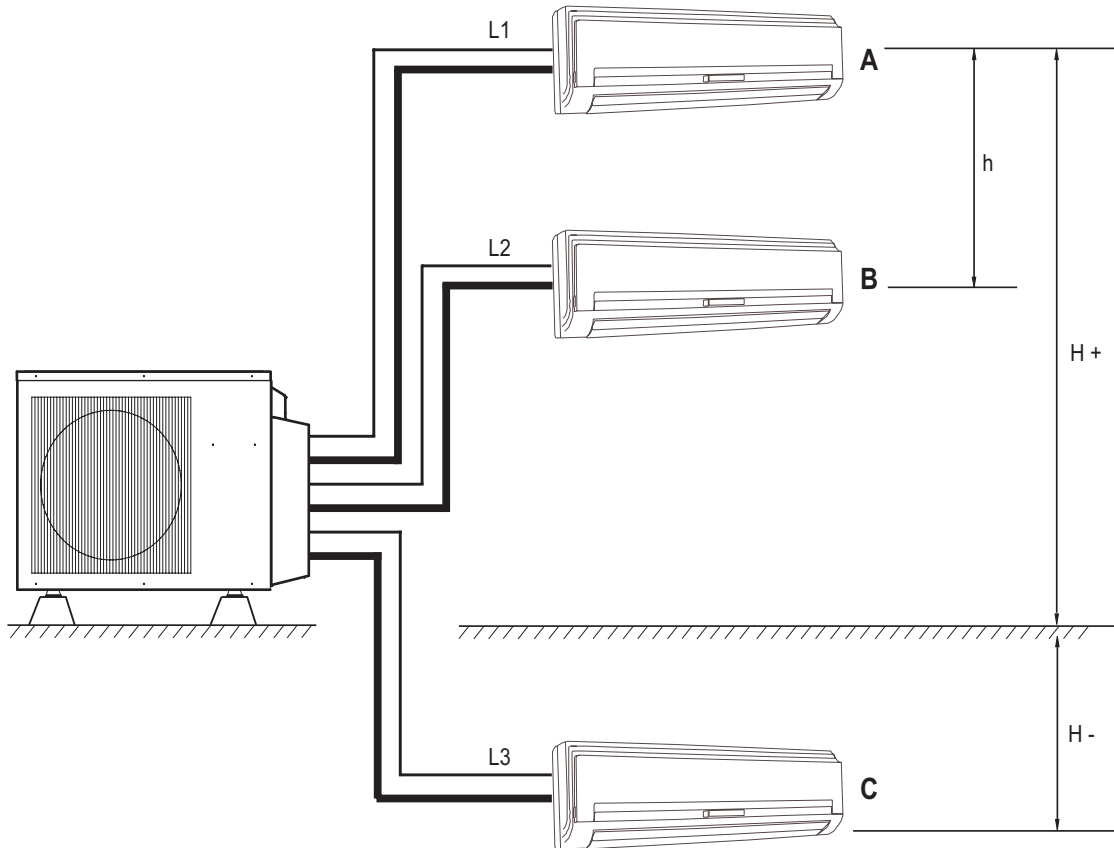
AU362XHERA:



- Please refer to the indoor unit installation manual to find detailly how to set and check the communication address.
- Incorrect address setting will cause abnormal to the system.

4.3 AU182XFERA,AU222XFERA limitations on the installation

Limitations values on the piping work .

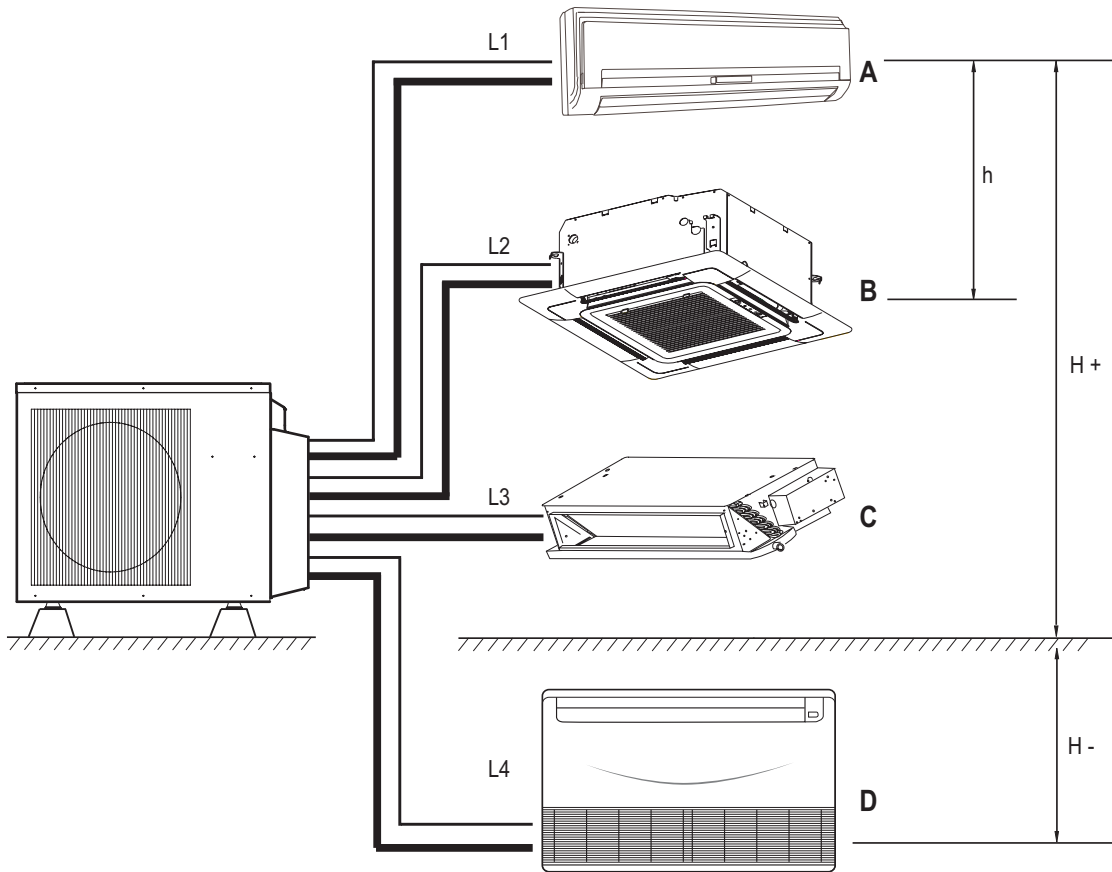


The piping length information, please refer the following table.

Item	Unit	Descriptions	Standard	Maximum
A, B, Cliquid pipe	mm	Size of the liquid side connection pipe	$\varnothing 6.35$	/
A, B, C Gas pipe	mm	Size of the gas side connection pipe	$\varnothing 9.52$	/
L1 (one way)	m	Pipe length when the compressor connects with two indoor units	≤ 10	≤ 25
L2 (one way)	m	Pipe length when the compressor connects with two indoor units	≤ 10	≤ 25
L3 (one way)	m	Pipe length when the compressor connects only one indoor unit	≤ 10	≤ 25
L1+L2+L3	m	Total liquid piping length	≤ 30	≤ 45
h	m	Drop between every two indoor units	≤ 1	≤ 5
H +	m	Drop between the outdoor unit and the indoor unit	≤ 5	≤ 15
H -	m	Drop between the outdoor unit and the indoor unit	≤ 5	≤ 10

AU28-342XHERA

Limitations values on the piping work .

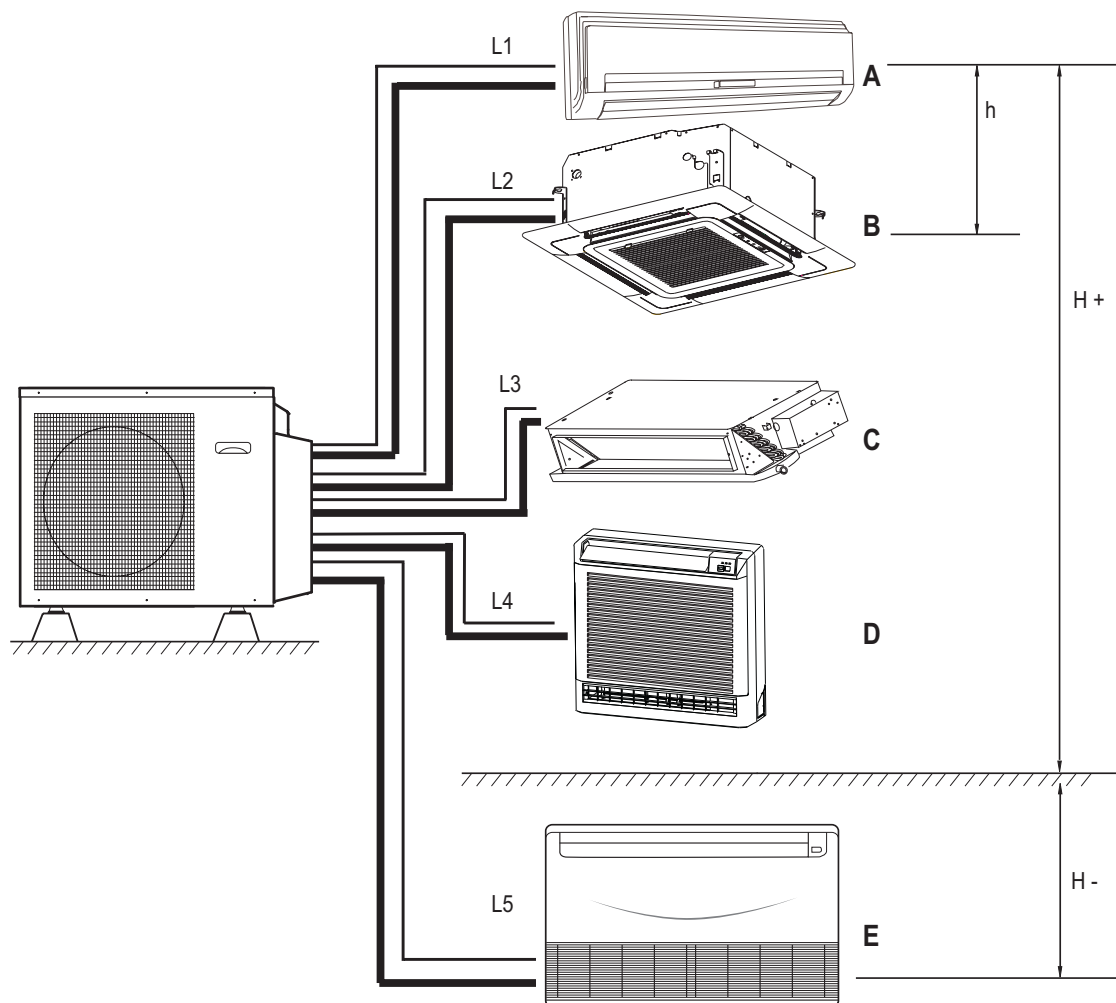


The piping length information, please refer the following table.

Item	Unit	Descriptions	Standard	Maximum
A, B, C,D liquid pipe	mm	Size of the liquid side connection pipe	Ø6.35	/
A, B, C,D Gas pipe	mm	Size of the gas side connection pipe	Ø9.52	/
L1 (one way)	m	Pipe length when the compressor connects with two indoor units	≤10	≤25
L2 (one way)	m	Pipe length when the compressor connects with two indoor units	≤10	≤25
L3 (one way)	m	Pipe length when the compressor connects only one indoor unit	≤10	≤25
L4 (one way)	m	Pipe length when the compressor connects only one indoor unit	≤10	≤25
L1+L2+L3+L4	m	Total liquid piping length(It is no need to charge additional refrigerant within this value)	≤40	≤60
h	m	Drop between every two indoor units	≤1	≤5
H +	m	Drop between the outdoor unit and the indoor unit	≤5	≤15
H -	m	Drop between the outdoor unit and the indoor unit	≤5	≤10

AU362XHERA

Limitations values on the piping work .



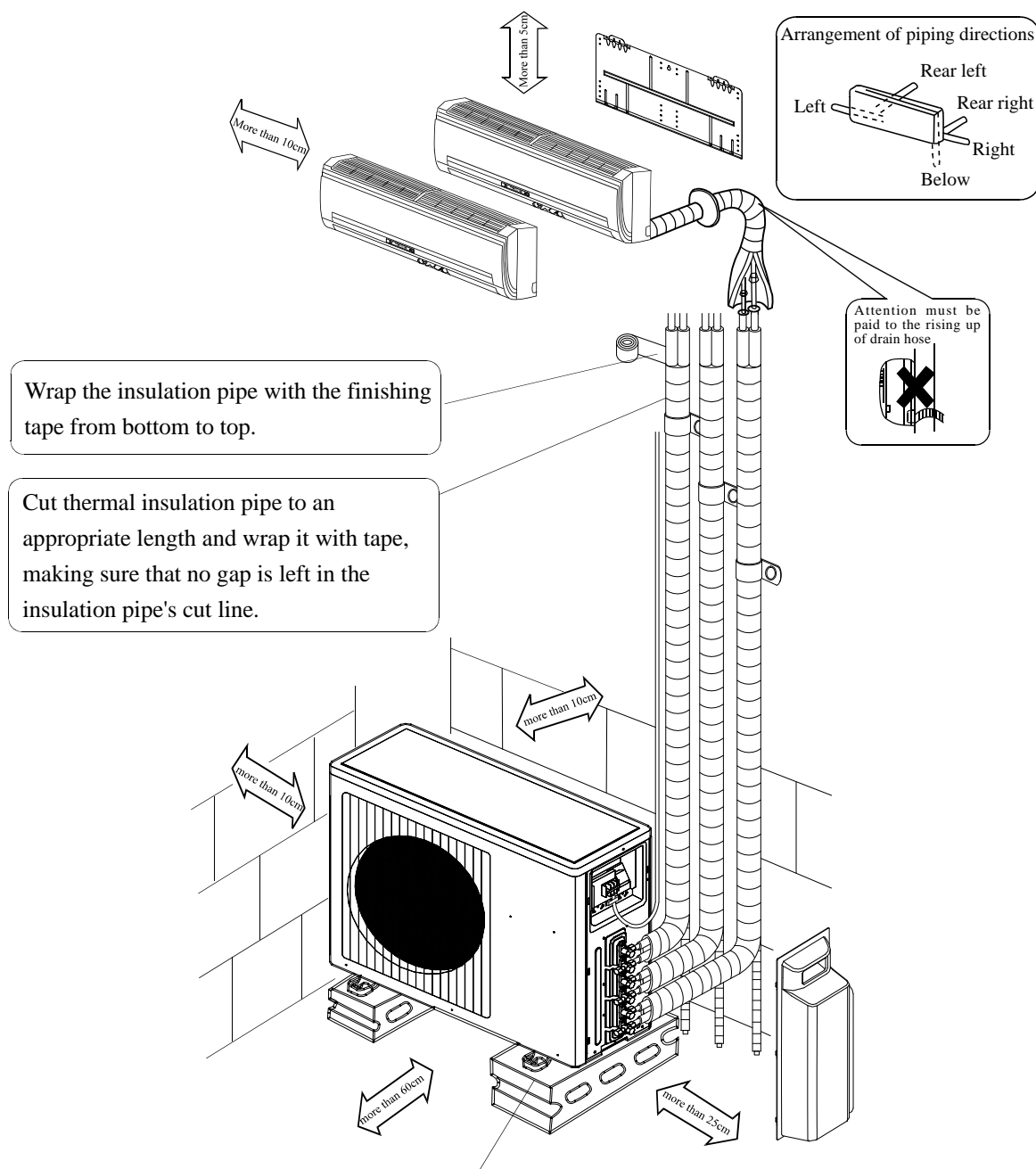
The piping length information, please refer the following table.

Item	Unit	Descriptions	Standard	Maximum
A, B, C, D, E liquid pipe	mm	Size of the liquid side connection pipe	Ø 6.35	/
A, B, C, D, E Gas pipe	mm	Size of the gas side connection pipe	Ø 9.52	/
L1 (one way)	m	Conneting pipe length	≤ 10	≤ 25
L2 (one way)	m	Conneting pipe length	≤ 10	≤ 25
L3 (one way)	m	Conneting pipe length	≤ 10	≤ 25
L4 (one way)	m	Conneting pipe length	≤ 10	≤ 25
L5 (one way)	m	Conneting pipe length	≤ 10	≤ 25
L1+L2+L3+L4+L5	m	Total liquid piping length(It is no need to charge additional refrigerant within this value)	≤ 40	≤ 60
h	m	Drop between every two indoor units	≤ 1	≤ 5
H +	m	Drop between the outdoor unit and the indoor unit	≤ 5	≤ 15
H -	m	Drop between the outdoor unit and the indoor unit	≤ 5	≤ 10

4.4 Outdoor units installation

Installation drawings of indoor and outdoor units

1. Do not connected the embedded branch piping and the outdoor unit when only carrying out piping work without connecting the indoor unit in order to add another indoor unit later. Make sure no dirt or moisture gets into either side of the embedded branch piping.
2. It is impossible to connect the indoor unit for one room only. Be sure to connect at least 2 rooms.



If there is the danger of the unit falling or overturning, fix the unit with foundation bolts, or with wire or other means.

If the location does not have good drainage, place the unit on a level mounting base (or a plastic pedestal). Install the outdoor unit in a level position. Failure to do so may result in water leakage or accumulation.

■ Refrigerant piping work

1. Selection of pipe

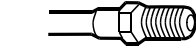
- To this unit, both liquid and gas pipes shall be insulated as they become low temperature in operation.
- Use optional parts for piping set or pipes covered with equivalent insulation material.

Liquid pipe	Ø 6.35mm (1/4") x 0.8mm
Gas pipe	Ø 9.52mm (3/8") x 0.8mm

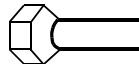
2. Connection of pipe

- Apply refrigerant oil on half union and flare nut.
- To bend a pipe, give the roundness as large as possible not to crush the pipe.
- Connecting the pipe of gas side firstly makes working easier.

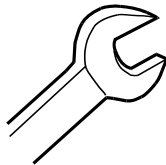
Half union



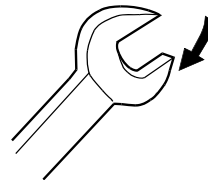
Flare nut



Spanner



Torque wrench

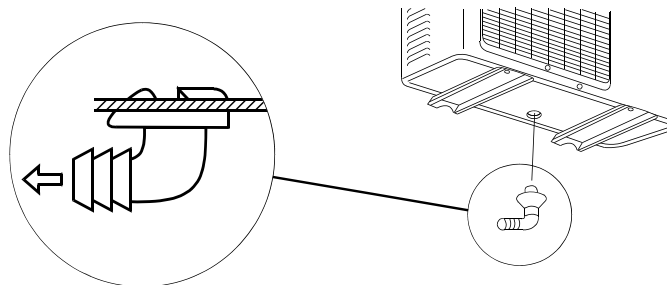


Forced fastening without careful centering may damage the threads and cause a leakage of gas.

Pipe Diameter (Ø)	Fastening Torque
Liquid Side 6.35mm (1/4")	18N.m
Gas Side 9.52mm (3/8")	50N.m

3. Attaching Drain-Elbow

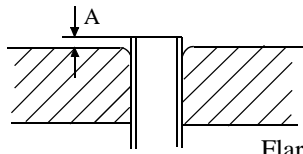
- If the drain-elbow is used, please attach it as figure.



4. Cutting and Flaring work of piping

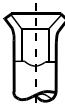
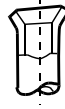
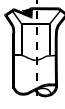

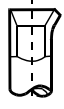

- Pipe cutting is carried out with a pipe cutter and burs must be removed.

After inserting the flare nut, flaring work is carried out.



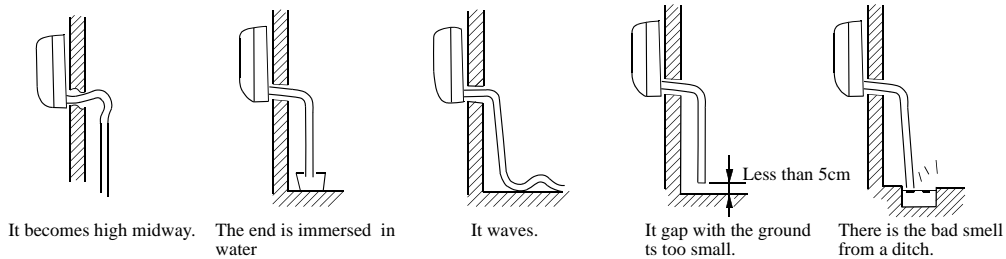
Flare tooling die

	Pipe diameter ϕ	Size A (mm)
Liquid side	6.35mm(1/4")	0.8~1.5
Gas side	9.52mm(3/8")	1.0~1.5

Correct	Incorrect				
					
	Lean	Damage of flare	Crack	Partial	Too outside

5. On drainage

- Please install the drain hose so as to be downward slope without fail.
- Please don't do the drainage as shown below.



- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out serenely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fail.

■ Purging method: to use vacuum pump

①. Detach the service port cap of 3-way valve, the valve rod's cap for 2-way valve and 3-way valves, connect the service port into the projection of charge hose (low) for gaugemanifold. Then connect the projection of charge hose (center) for gaugemanifold into vacuum pump.

②. Open the handle at low in gaugemanifold, operate vacuum pump. If the scale-moves of gauge (low) reach vacuum condition in a moment, check ① again.

③. Vacuumize for over 15min. And check the level gauge which should read -0.1MPa (-76 cm Hg) at low pressure side. After the completion of vacuumizing, close the handle 'Lo' in the vacuum pump. Check the condition of the scale and hold it for 1-2min. If the scale-moves back in spite of tightening, make flaring work again, then return to the beginning of ③.

④. Open the valve rod for the 2-way valve to an angle of anticlockwise 90 degree. After 6 seconds, close the 2-way valve and make the inspection of gas leakage.

⑤. No gas leakage?

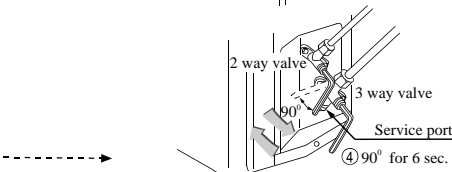
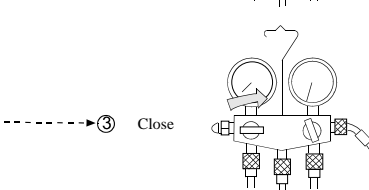
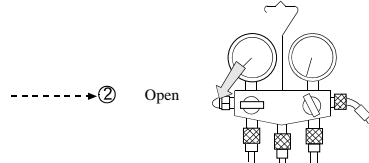
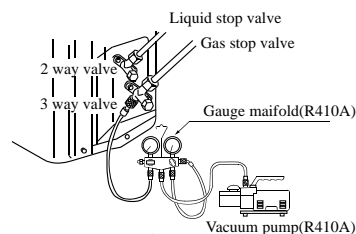
In case of gas leakage, tighten parts of pipe connection. If leakage stops, then proceed ⑥ steps.

⑥. Detach the charge hose from the service port, open 2-way valve and 3-way. Turn the valve rod anticlockwise until hitting lightly.

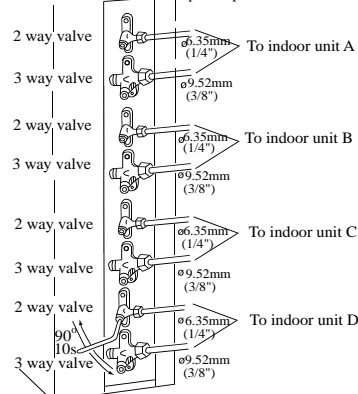
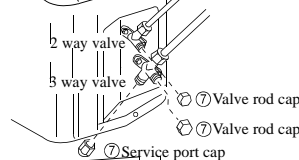
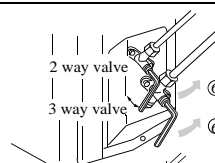
⑦. To prevent the gas leakage, turn the service ports cap, the valve rod's cap for 2-way valve and 3-way's a little more than the point where the torque increases suddenly.

⑧. Take the same steps from ① to ⑦ for each ways to ensure a completely vacuum for the whole system.

CAUTION: If the refrigerant of the air conditioner leaks, it is necessary to make all the refrigerant out. Vacuumize first, then charge the liquid refrigerant into air conditioner according to the amount marked on the name plate.



If it does not stop gas leakage, discharge whole refrigerants from the service port. After flaring work again and vacuumize, fill up prescribed refrigerant from the gas cylinder.



■ Wiring work

1. Electric wiring

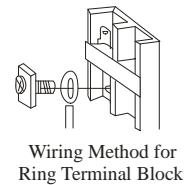
Note:

- The air conditioner must use special circuit , and wiring by the qualified electrician according to the wiring rules specified in national standard.
- The grounding wire and the neutral wire shall be strictly separated. Connect the neutral wire with grounding wire is incorrect.
- The electric leakage breaker must be installed.
- All the electric wire must be copper wire. When wiring, there shall keep a proper distance between the power line and communication wire to avoid twist together. Otherwise, signal disturbance will occur, and the air conditioner can not operate normally. Power supply: 1PH, 220-230V~, 50Hz.
- The wiring method of power line is Y connection. If the power line is damaged, in order to avoid risk of electric shock, it must be replaced by the manufacturer or its repair center or other similar qualified person. The connecting cable must be shielded.
- Fuse: T3.15A 250VAC T25A 250VAC (Please check with the outdoor unit wiring diagram.)
- Please check the circuit diagram about the fuse replaced.

2. Wiring method

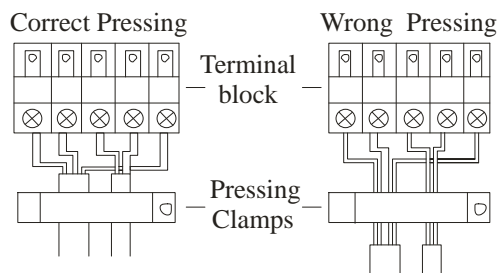
- Wiring method of orbicular terminals

For the connection wire with orbicular terminals, its wiring method is as shown in the right figure: remove the connecting screw, put the screw through the ring on the end of the wire, then connect to the terminal block and fasten screw.



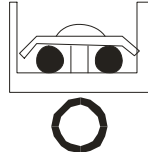
- Wiring method of straight terminals

For the connection wire without orbicular terminals, its wiring method is: loosen the connection screw, and insert the end of the connection wire completely into the Terminal block, then fasten the screw. Slightly pull the wire outwards to confirm it is firmly held.

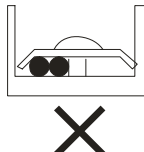


- Crimp connection method for wires without terminals

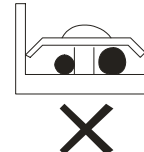
Connect the wire with same diameter to the two sides of the terminal



Do not connect the wire with same diameter to the same side



Do not connect the wire with different diameters



■ Wiring work

Crimp connection method for connection wire

After connection, the wire must be fastened by wire cover. The wire cover shall press on the protection coat of the connection wire, as shown in right top figure.

Note: When connecting the wiring, confirm the terminal number of indoor and outdoor units carefully. Incorrect wiring will damage the controller of air conditioner or the unit can not operate.

3. Wiring method of outdoor unit:

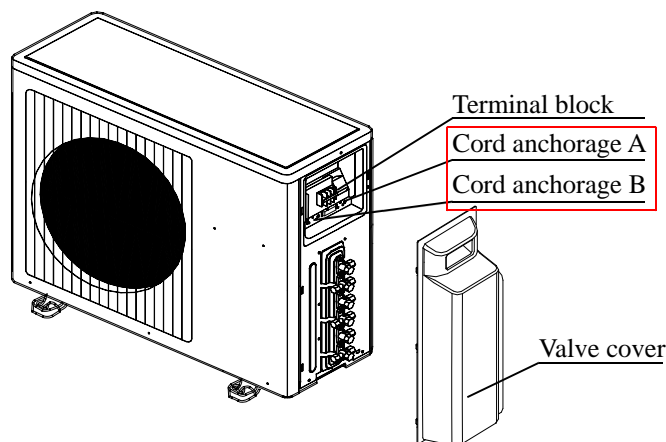
- Power line

Remove the repair board of the outdoor unit and loosen the wire cover A, then put the live wire, neutral wire and grounding wire through the wire cover, and connect them to terminal block correspondingly. After connection, fasten wire cover to its previous state.

- Communication wire of indoor unit.

Loosen wire cover, put the communication wire through the wire cover B, and connect them to terminal block correspondingly. After connection, fasten wire cover B to its previous state.

Note: Power line and communication wire are provided by consumers themselves.



4. Wiring method of indoor unit

Loosen wire cover and connect the power line and communication wire of indoor unit to the terminal correspondingly.

Note:

When connecting power line to power supply terminal, please pay attention to the following items:

- Do not connect the power line with different dimensions to the same connection wire end.
Improper contact will cause heat generation.
- Do not connect the power line with different dimensions to the same grounding wire end.
Improper contact will affect protection.
- Keep a proper distance between the communication wire and the power line. Otherwise, abnormal communication will occur because of disturbance. And also, the communication wires should be shielded wire, and the shield cover should be grounded on the outdoor unit.
- Do not connect the power line to the connecting end of communication wire.
Incorrect connection will cause damage to the connected unit.

■ Test running

- Before starting the test running, please confirm the following works have been done successfully.
 - 1) Correct piping work;
 - 2) Correct wiring work;
 - 3) Correct match of indoor and outdoor unit;
 - 4) Proper recharge of refrigerant if needed;
 - 5) Correct indoor unit addresses setting.
- Make sure that all the stop valves are fully open.
- Check the voltage supplied to the outdoor and indoor units, please confirm that is 230V.
- Test running.
 - 1) If the temperature is lower than 16 °C, it is impossible to test cooling with remote controller, and also when the temperature is higher than 30 °C, it is impossible to test heating.
 - 2) To test cooling, set the lowest temperature at 16 °C. To test heating, set the highest temperature, at 30°C.
 - 3) Please check both cooling and heating operation of each unit individually and then also check the simultaneous operation of all indoor units.
 - 4) After running the unit for about 20 minutes, check the indoor unit outlet temperature.
 - 5) After the unit is stopped, or working mode changed, the system will not start again for about 3 minutes.
 - 6) During cooling operation, frost may occur on the indoor unit or pipes, this is normal.
 - 7) Operate the unit according to the operation manual. Please kindly explain to our customers how to operate through the instruction manual.

■ Items to confirm

Check items for test run, put mark "✓ in ☐.

- ☐ Gas leakage from pipe connection?
- ☐ Heat insulation treatment of pipe connection?
- ☐ Are the connection wiring of indoor and outdoor unit firmly inserted into the terminal block?
- ☐ Is the connection wiring of indoor and outdoor firmly fixed?
- ☐ Is drainage securely arranged?
- ☐ Is the ground wire securely and firmly connected?
- ☐ Is power supply voltage abided by electric code?
- ☐ Is there any noise?
- ☐ Does cooling perform normally?
- ☐ Does room temperature regulator operate normally?

4.5. Cassette type AB***XCERA Installation Tools

1. Installation tools

The installation tools listed in the following sheet can be used as required.

1. Screw driver
 2. Hacksaw
 3. Drill with a diameter of 60mm
 4. Inner hexagon spanner, shifting spanner
 5. Spanner (14, 17, 19, 24, 27mm)
 6. Pipe cutter
 7. Pipe expander
 8. Knife
 9. Pincers
 10. Leakage detector or soapy water
 11. Band tape
 12. Scraper
 13. Refrigerant oil
2. Accessories (factory provided)

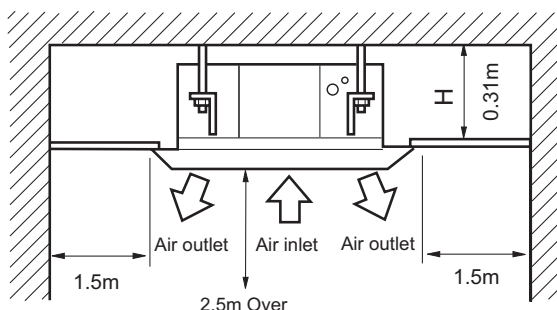
Symbol	Parts Name
A	Adhesive tape
B	Pipe clamp
C	Connecting hose
D	Drainage hose
E	Non-hydroscopic heat insulating material
F	Gypsum powder

Installation Procedures

1. Selection of Installation Place

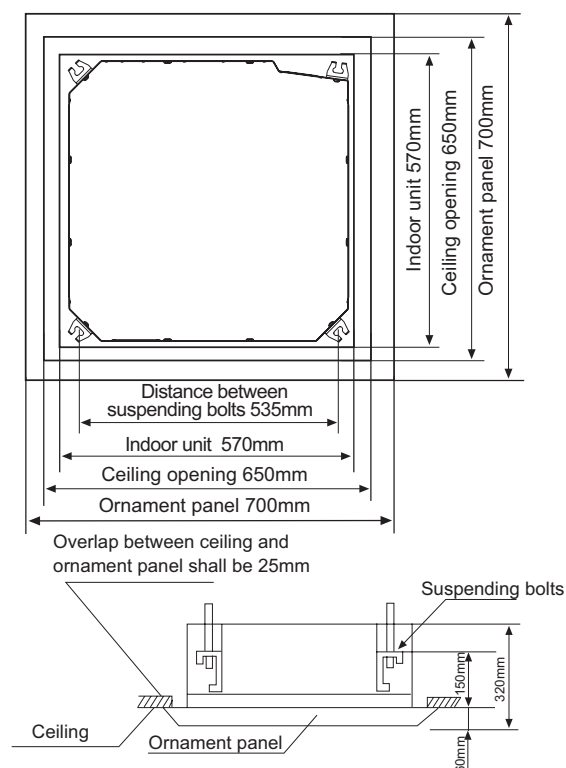
- (1) Place above the ceiling where have enough space to arrange the unit.
- (2) Place where the drainage pipe can be arranged well.
- (3) Place where inlet and outlet air of indoor and outdoor unit will not be blocked.
- (4) Do not expose the unit to the place with heavy oil or moisture (e.g. kitchen and workshop).
- (5) Do not set the unit in the place where destructive gas (such as sulfuric acid gas) or pungent gas (thinner and gasoline) concentrates and retains.

- (6) Place strong enough to support the unit weight.
- (7) No expensive articles such as television and piano below indoor unit.
- (8) Enough space for maintenance.
- (9) Place more than 1m away from television and radio to avoid disturbing television and radio.
- (10) Easy for maintenance.



2. Installation Preparation

- (1) Position of ceiling opening between unit and suspending bolt (front view of unit).



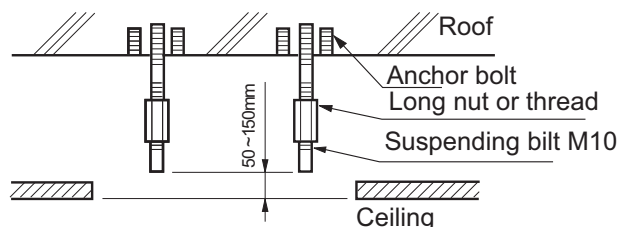
- (2) Prepare all piping (refrigerant, water drainage) and wires (connection wire of remote controller, indoor unit connection wires) to the indoor unit before installation in order to connect indoor unit immediately after installation.

Installation Procedures

(3) Install a suspending bolt

To support the unit weight, anchor bolt should be used in the case of already exists ceiling. For new ceiling, use flush-in type bolt, built-in type bolt or parts prepared in the field. Before going on installing, adjust space to ceiling.

<Installation Example>



Note: All the above mentioned parts shall be prepared in feild, the diameter of suspending bolt is M10

3. Installation of indoor unit

In case of no ceiling
Install unit temporarily

Put suspending bracket on the suspending bolt to hang the unit up. Be sure to use nut and washer at both end of the breaket to secure firmly.

After installation on the ceiling

(1) Adjust unit to its right position (Refer to preparation for installation-(1))

(2) Check that unit is horizontal.

Water pump and floating switch is installed inside indoor unit, check four corners of the unit for its lever using horizontal comparator or PVC tube with water. (If unit is tilting against the direction of water drainage, problem may occur on floating water leakage.)

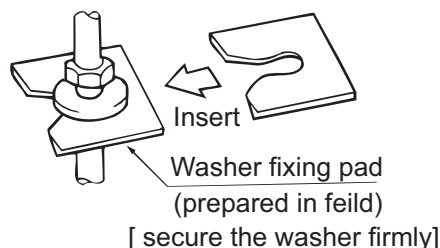
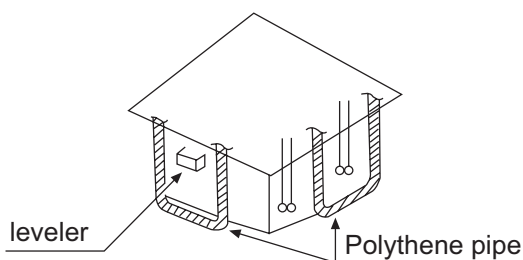
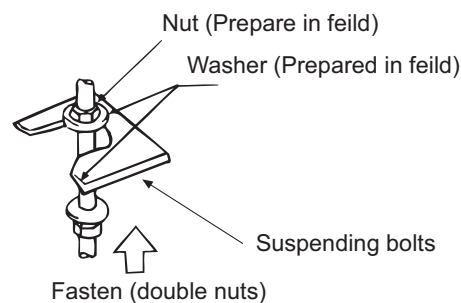
In the case of ceiling already exists

(1) Install unit temporarily

Put suspending bracket on the suspending bolt to hang the unit up. Be sure to use nut and washer at both end of the bracket to secure it firmly.

(2) Adjust the height and position of the unit.

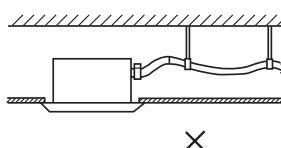
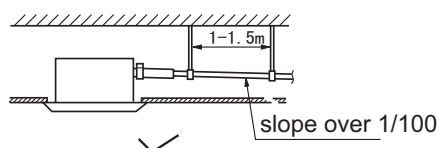
(3) Proceed with procedure (4) of " In the case of no ceiling "



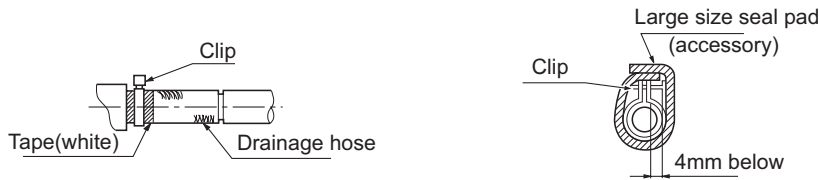
4. Installation of water drainage pipe

(1) Install water drainage pipe

- Pipe diameter shall be equal or larger than that of connecting pipe (Pipe of polythene; size:25mm; O.D.: 32mm)
- Drainpipe should be short, with a downward slope at least 1/100 to prevent air bag from forming.
- If downward slope of drainpipe cannot be made, lifting pipe shall be installed.
- Keep a distance of 1-1.5m between suspending bolts, to make water hose straight.

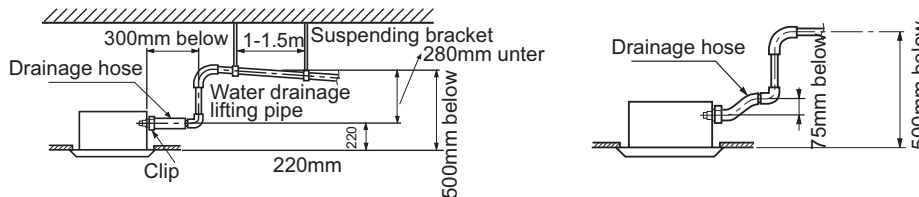


- Use the drainage hose and clip provided with unit.
Insert water pipe into water plug until it reaches the white tape.
Tighten the clip until head of the screw is less than 4mm from hose.
- Wind the drainage hose to the clip using seal pad for heat insulation.
- Insulate drainage hose in the room.



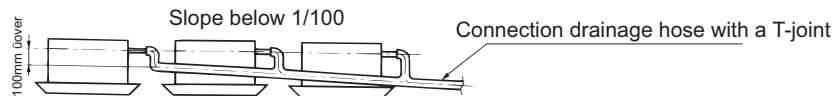
5. Cautions for the water drainage lifting pipe

- Installation height of water drainage lifting pipe shall be less than 280mm
- There should be a right angle with unit ,300mm from unit.



< Note >

- The slope of water drainage hose shall be within 75mm , make the drainage plug not to bear excessive force.
- If several water hoses join together, of as per following procedures.

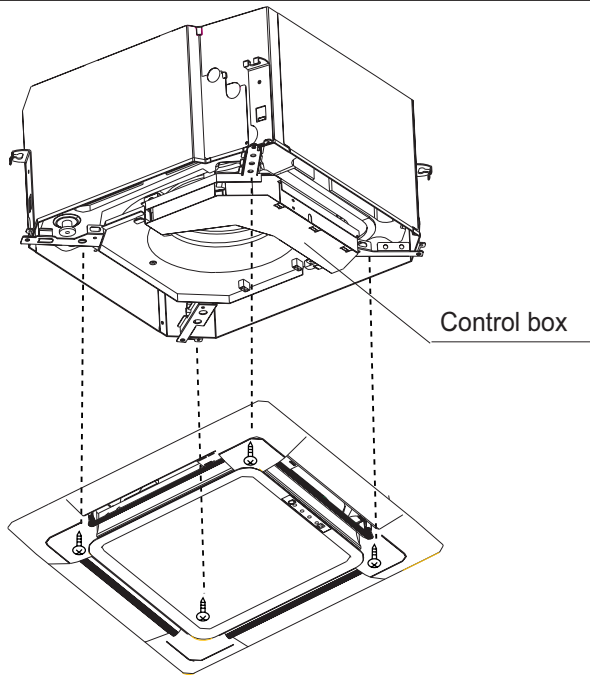


Specifications of the selected drainage hoses shall meet the requirements for the unit running

6. Installation of Ornament Panel

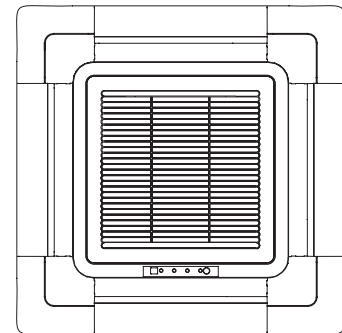
Install ornament panel on indoor unit

- (1) Check whether indoor unit is horizontal with leveler or polythene pipe filled with water , and check that the dimension of the ceiling opening is correct. Take off the lever gauge before installing the ornament panel.
- (2) Fasten the screws to make the height difference between the two sides of indoor unit less than 5mm.
- (3) First fix it with screws temporally.
- (4) Fasten the two temporally fixing screws and other two, and tighten the four screws.
- (5) Connect the wires of synchro-motor.
- (6) Connect the wire of signal.
- (7) If no response of remote controller,check whether the wiring is correct,restart remote controller 10 seconds after shut off power supply.

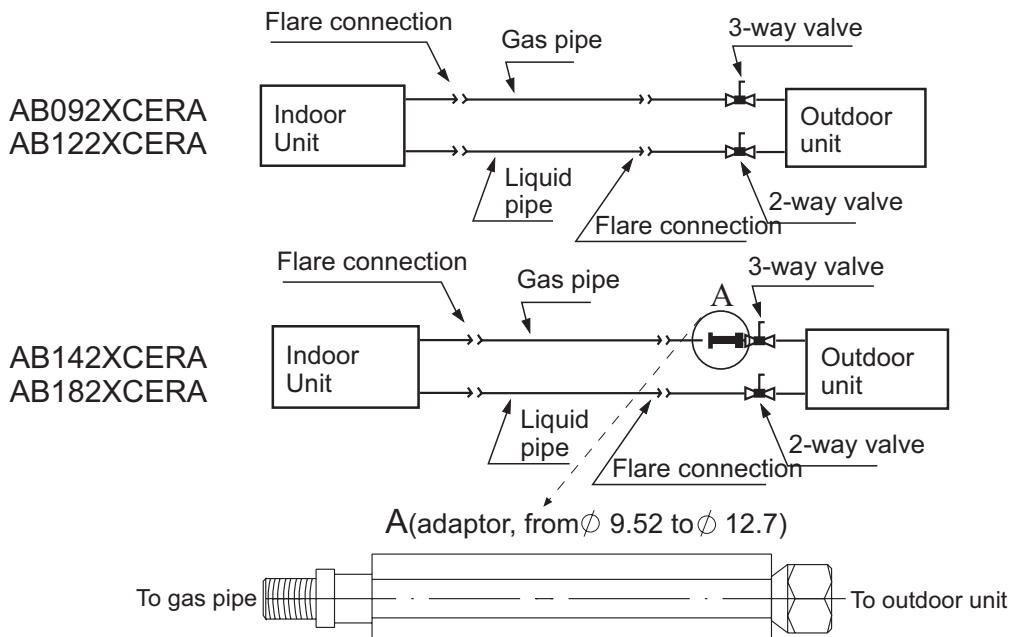


Limits of panel board installation

- (1) Install the panel board in the direction shown in the figure.
- (2) The incorrect direction will result in water leakage, meanwhile swing and signal receiving are not be connected successfully.

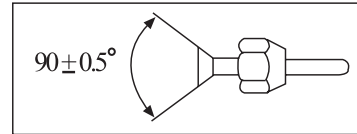


7. Piping Connection



(1) Dimension of connecting pipe

AB092XCERA AB122XCERA	Gas pipe	$\phi 9.52\text{mm}$
	Liquid pipe	$\phi 6.35\text{mm}$
AB142XCERA AB182XCERA	Gas pipe	$\phi 12.7\text{mm}$
	Liquid pipe	$\phi 6.35\text{mm}$



- Fit the nut on and fasten

(2) The maximum length and drop height of connecting pipe

- The maximum length is 20m
- The maximum drop height is 10m.
- To ensure the efficiency ,Pipes shall be as short as possible.



Cautions for piping connection

- Do not twist or deform the connecting pipe.
- Do not mix dusts.
- The bending radius shall be as large as possible.
- Both gas pipe and liquid pipe shall be heat insulation.
- No leakage in the flare.

(3) Piping connection

- Connecting method

Smear refrigerant oil on the joints of piping and flare.

The bending radius shall be as large as possible.

Align the pipe center when fastening, and tighten the nut, as shown in the figure.

Pay attention to not mix foreign matters such as sands in.

Diameter of Pipe	Tighten Torque (N.m)
Liquid Pipe 6.35mm	11.8
Gas Pipe 9.52mm	50

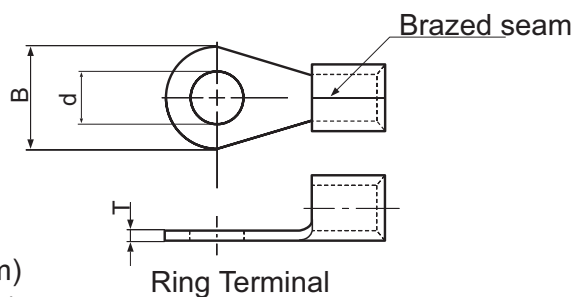
If not aligned ,tighten the nut by force will damage the nut that result in gas leakage

8.Electrical Wiring

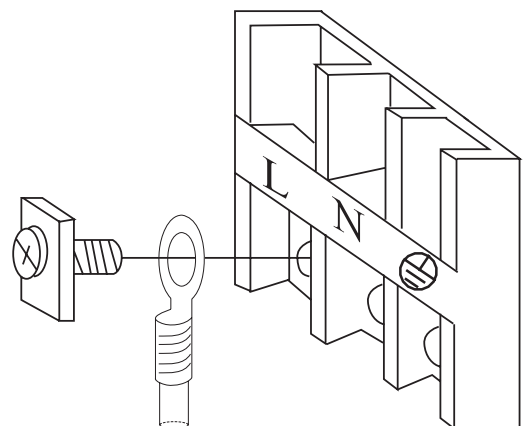
Wiring methods:

8.1 Wiring method of ring terminal

For connecting line whose end is a ring,its wiring method as shown in the right figure: remove wiring screw and pass it through the end ring of connecting line,then connect it to the terminal block and tighten screw.



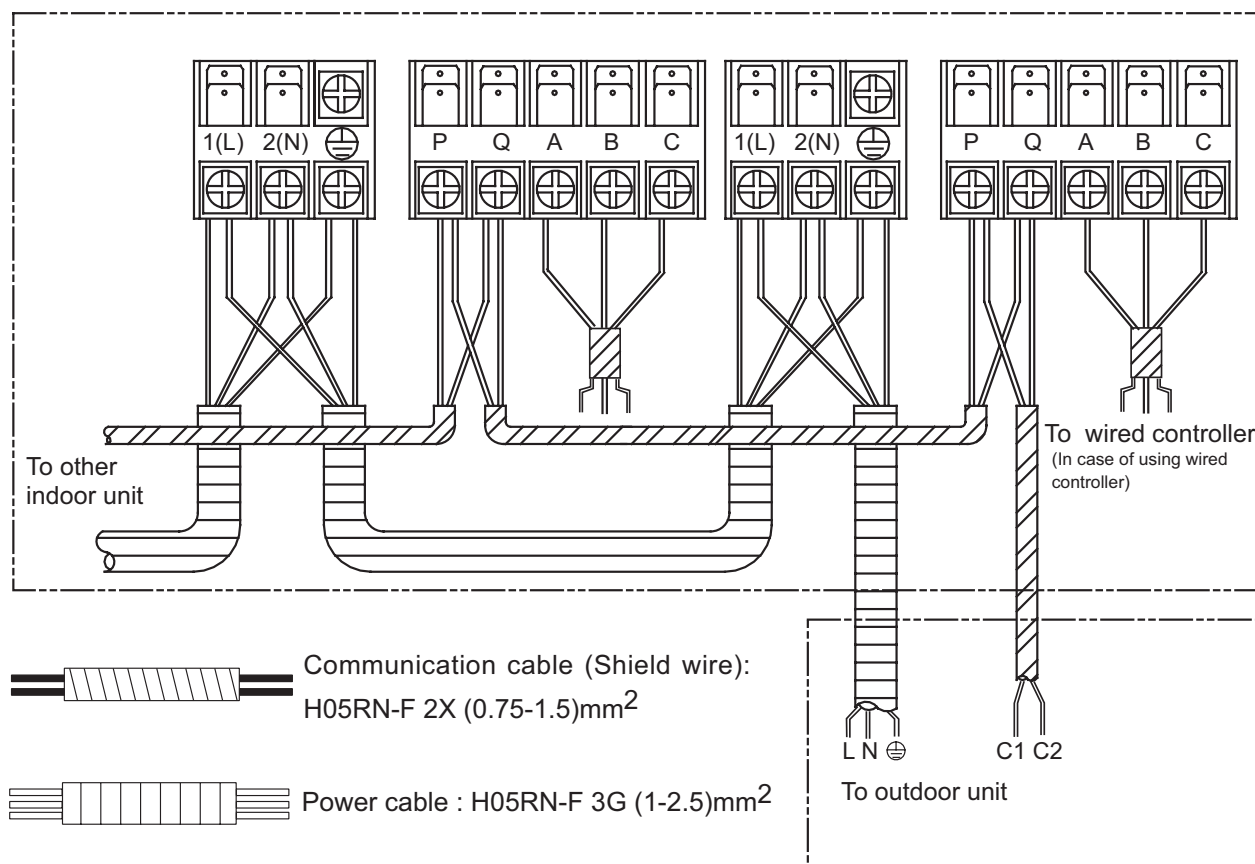
B=8.0-9.0(mm)
d=4.3-5.3(mm)
T=1.0-2.0(mm)
(For your reference)



Wiring method of ring terminal

8.2 Wiring of indoor unit

The distance between the signal wires and the power cables should be at least 50mm.



9. Indoor unit communication addresses setting

CAUTION! FAIL TO DO THIS, THE UNIT WILL NOT WORK.

1. There are two methods to set the communication address

- A. Use the remote controller (default status in first installation).
- B. Use dip switches on the indoor unit PCB.

2. Address setting procedure when using the remote controller.

- A. Set the addresses only after the successful installation of the refrigerant pipes and connecting cables, and open all the stop valves;
- B. Please confirm that the indoor units and the outdoor unit in the same system use the same power source;
- C. Power on the units, but put all the indoor units in the status of STANDBY;
- D. Please note that the address must be set as following:

Indoor unit that connect to valve A, the address must be 1;

Indoor unit that connect to valve B, the address must be 2;

Indoor unit that connect to valve C, the address must be 3;

Indoor unit that connect to valve D, the address must be 4;

the LED board is blank.

E. Example: set unit A to address 1.

Continuously press the emergency switch for about 15 seconds, the buzzer will sound 4 times (PI PI PI PI) and then leave go of the switch. At this time, the indoor unit has entered the address setting procedure. But F. Use the controller to turn on the indoor unit. At this time, the controller should be changed from OFF to ON, and then the TIMER LED flashes once. That is to say, the address setting is enabled.

G. Press the button "SLEEP" on the controller, the times you press it stands for the address you want to set, detailed as following:

Press button "SLEEP" once, the address is "1", and the TIMER LED flashes once;

Press button "SLEEP" twice, the address is "2", and the TIMER LED flashes twice;

- Press button " SLEEP " three times, the address is " 3 ", and the TIMER LED flashes three times;
 Press button " SLEEP " four times, the address is " 4 ", and the TIMER LED flashes four times;
 H. Use the remote controller to turn off the unit, At this time, the controller should be changed from ON to OFF, and the unit will exit the address setting procedure, the address will be memorized. The LED board will always display the address of this indoor unit until the system be powered off.
 I. If you want to change the address, please repeat the above steps from E to G.
 J. After setting all the addresses, please power off the system and then power on again. Otherwise the system will not start to work.
 K. Once the addresses are successfully set, please do not change it any more to avoid confusion.

3. Address setting procedure when using the DIP switches SW01 and SW03.

- A. The DIP switches SW01 and SW03 are on the indoor unit PCB.
 B. Before carrying out the address setting work, the system must be powered off.
 C. Take off the front panel and the filters, then take off the flaps and also the front cover,disconnect the swing motor connectors from the PCB and then take out the lower part of the PCB.
 D. Change the position of DIP 7 of SW01 from OFF to ON, if fail to do this, the addresses set by SW03 will not work.
 E. Use SW03 to set the addresses as following (DO NOT CHANGE OTHER DIP SWITCHES):

SW 01	SW 03	INDOOR UNIT ADDRESS																																																
<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>ON</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td><td></td></tr></table>	1	2	3	4	5	6	7	8							ON								OFF		<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>ON</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></table>	1	2	3	4	5	6	7	8								ON								OFF	1
1	2	3	4	5	6	7	8																																											
						ON																																												
						OFF																																												
1	2	3	4	5	6	7	8																																											
							ON																																											
							OFF																																											
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>ON</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></table>	1	2	3	4	5	6	7	8								ON								OFF	2																								
1	2	3	4	5	6	7	8																																											
							ON																																											
							OFF																																											
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>ON</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></table>	1	2	3	4	5	6	7	8								ON								OFF	3																								
1	2	3	4	5	6	7	8																																											
							ON																																											
							OFF																																											
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>ON</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></table>	1	2	3	4	5	6	7	8								ON								OFF	4																								
1	2	3	4	5	6	7	8																																											
							ON																																											
							OFF																																											

4. How to check the addresses?

When finish all the above works, please power off and power on again to the whole system but set all the indoor units in STANDBY. Then continously press the emergency switch until you hear the buzzer sound 5 times(Pi Pi Pi Pi Pi), and then the TIMER LED board will show the address of this indoor unit. Press any key on the remote controller, it will exit the address checking precedure.

4.6. Convertible type AC*** X CERA

SELECTING THE MOUNTING POSITION • Floor console

⚠ WARNING

Install at a place that can withstand the weight of the indoor and outdoor units and install positively so that the units will not topple or fall

⚠ CAUTION

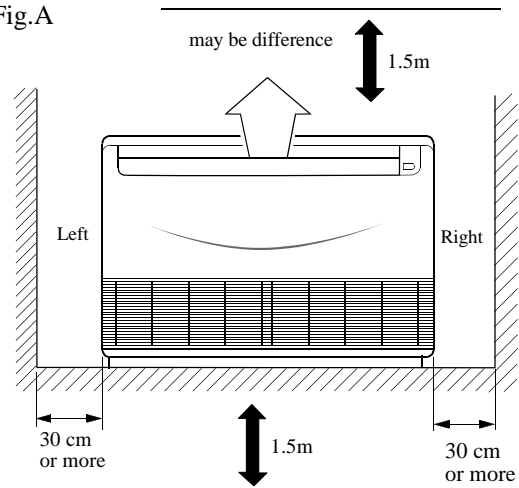
- (1) Do not install where there is the danger of combustible gas leakage.
- (2) Do not install near heat sources.
- (3) If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

Decide the mounting position with the customer as follows:

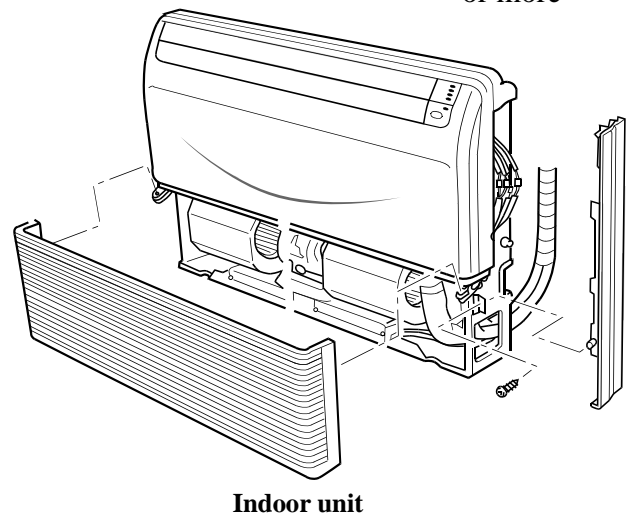
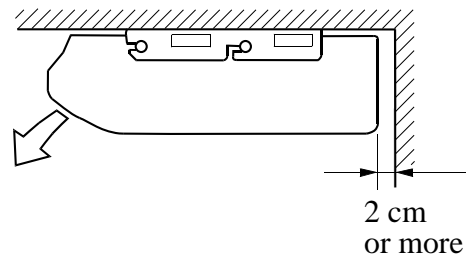
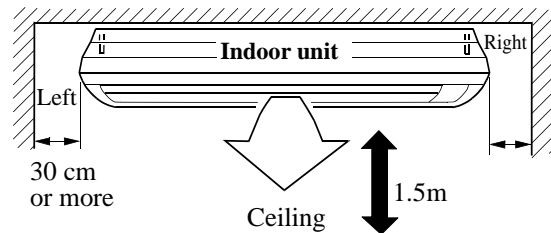
INDOOR UNIT

- (1) Install the indoor unit level on a strong wall, floor, ceiling which is not subject to vibration.
- (2) The inlet and outlet ports should not be obstructed: the air should be able to blow all over the room.
- (3) Install the unit near an electric outlet or special branch circuit.
- (4) Do not install the unit where it will be exposed to direct sunlight.
- (5) Install the unit where connection to the outdoor unit is easy.
- (6) Install the unit where the drain pipe can be easily installed.
- (7) Take servicing, etc. into consideration and leave the spaces shown in Fig.A. Also install the unit where the filter can be removed.

Fig.A



• Under ceiling

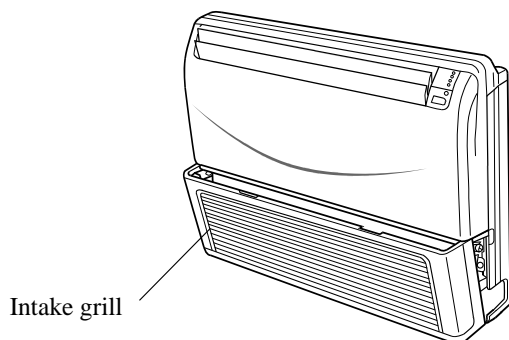


PREPARING INDOOR UNIT INSTALLATION

REMOVE THE INTAKE GRILL

Open the intake grill and remove the three or four or six screws.(Fig. 1)

Fig. 1



Remark:

The main unit can be wired before the indoor unit is installed. Select the most appropriate installation order.

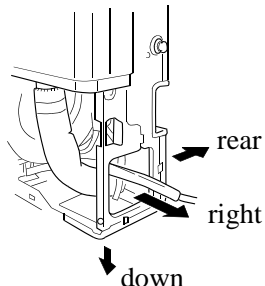
A. FLOOR CONSOLE TYPE

1. DRILLING FOR PIPING

Select piping and drain directions.(Fig.2)

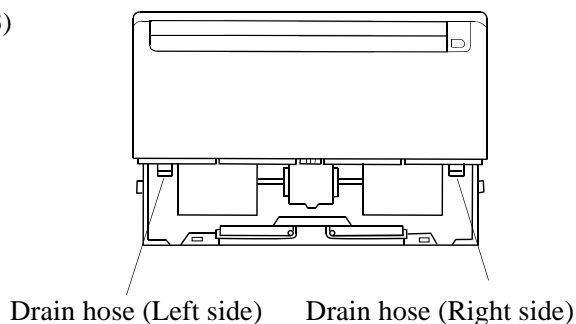
The piping and drain can be made in three directions as shown below.

(Fig.2)



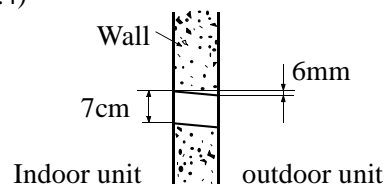
The drain hose can be connected to either the left or right side.(Fig.3)

(Fig. 3)



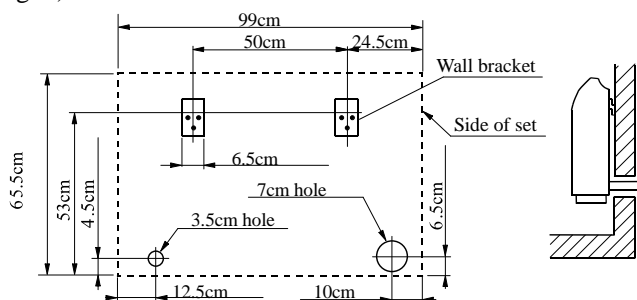
When the directions are selected, drill a 7 cm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow. When the pipe is led out from the rear, make a hole in Fig.4, at the position shown.

(Fig.4)



When installing set to wall, install the accessory wall bracket at the position shown in Fig.5, and mount the set to it.

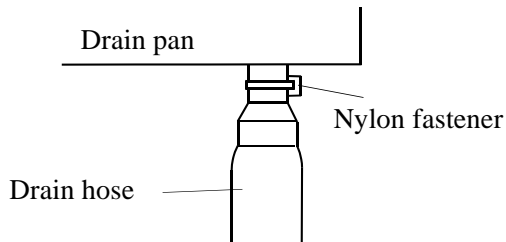
(Fig. 5)



2. INSTALLING DRAIN HOSE

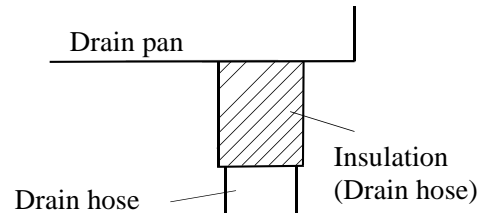
Select whether the drain hose will be connected to the left or right side.(Fig.3) Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener. (Fig.6)

(Fig. 6)



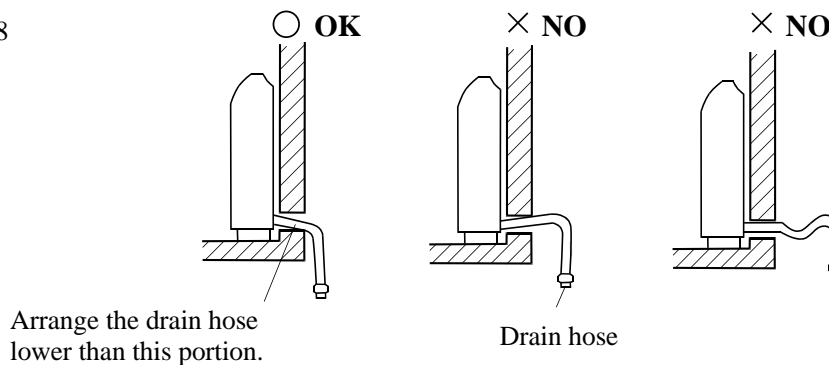
Wrap the insulation (drain hose) around the drain hose connection. (Fig.7)

(Fig. 7)



Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit.

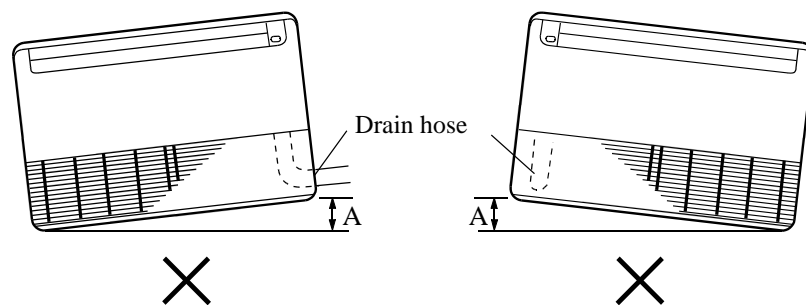
Fig. 8



CAUTION

Do not install the unit drain hose side is too high. Height A should be less than 5 mm.(Fig.9)

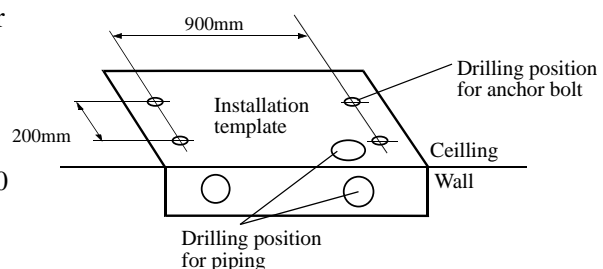
Fig. 9



B. UNDER CEILING TYPE

Using the installation template, drill holes for piping and anchor bolts(for holes).(Fig.10)

Fig. 10



1. DRILLING FOR PIPING

Select piping and drain directions.
(Fig.11)

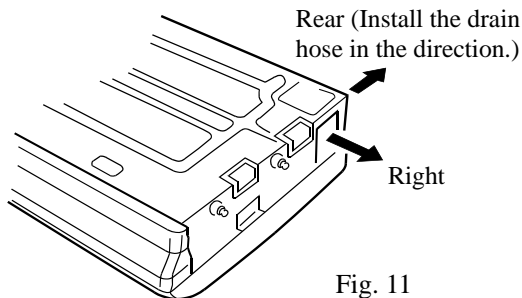


Fig. 11

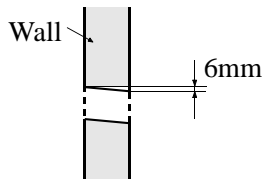


CAUTION

Install the drain hose at the rear; it should not be installed on the top or right side.

When the directions are selected, drill 80mm and 50mm or 150mm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow.

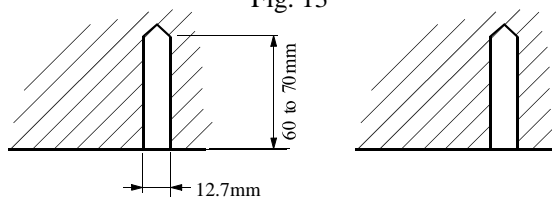
Fig. 12



2. DRILLING HOLES FOR ANCHOR BOLTS AND INSTALLING THE ANCHOR BOLTS

With a concrete drill, drill four 12.7 mm dia. Holes.
(Fig.13)

Fig. 13



Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer.
(Fig. 14)

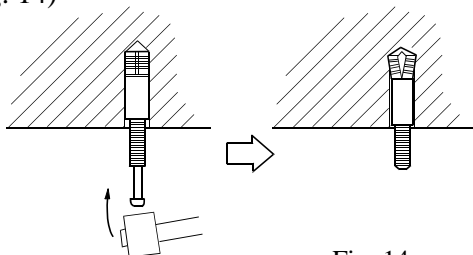
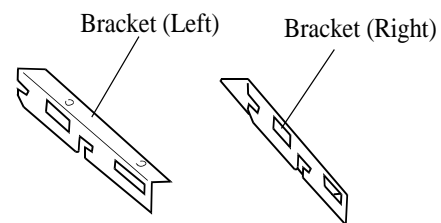
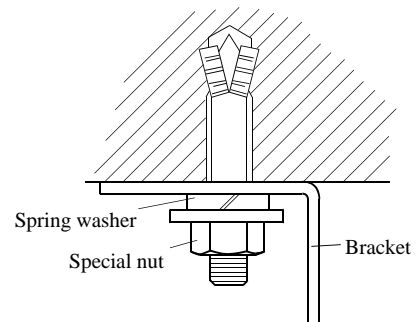


Fig. 14

3. INSTALLING BRACKETS

Install the brackets with nuts, washers and spring washers.(Fig. 15)

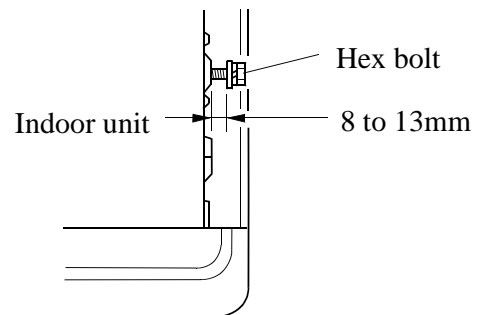
Fig. 15



4. INSTALLING INDOOR UNIT

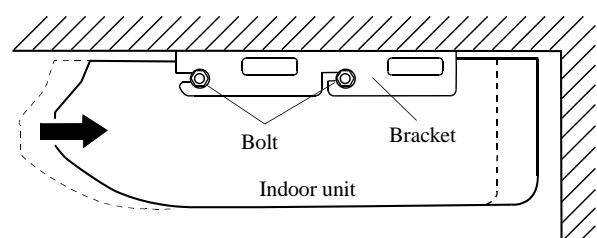
Reset the hex bolts as shown in Fig.16.

Fig. 16



Apply the indoor unit to the brackets.(Fig.17)

Fig. 17



Now, securely tighten the hex bolts in both sides.

5. INSTALL THE DRAIN HOSE

Select whether the drain hose will be connected to the left or right side.(Fig.3)

Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener.(Fig.6)

Wrap the insulation (drain hose)around the drain hose connection.(Fig.7)

Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit.(Fig.18)

Fig. 18

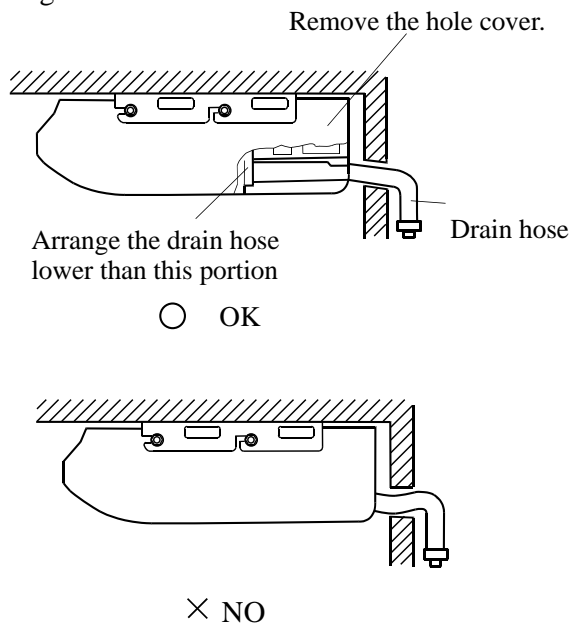
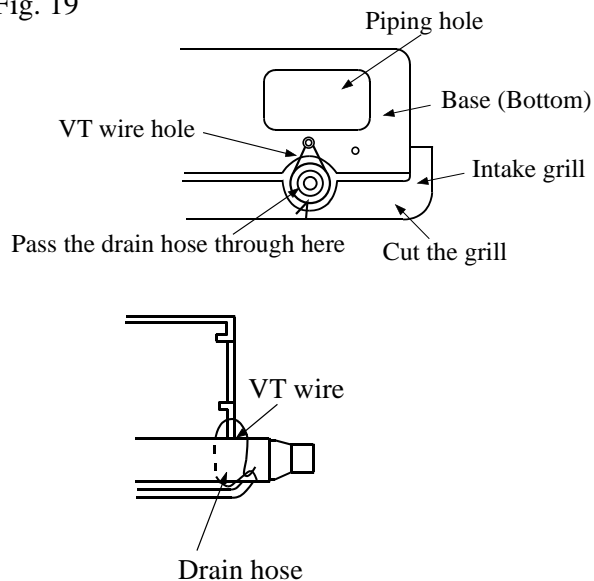


Fig. 19



OUTDOOR UNIT INSTALLATION

CONNECTING THE PIPING

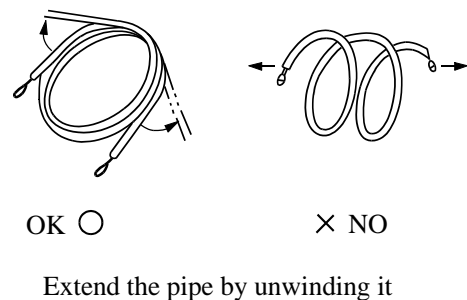
1. FLARE PROCESSING

- (1) Cut the connection pipe with pipe cutters so that the pipe is not deformed.
- (2) Holding the pipe downward so that cuttings cannot enter the pipe, remove the burrs.
- (3) Remove the flare nut from the indoor unit pipe and outdoor unit and insert the flare nut onto the pipe, and flare with a flaring tool.

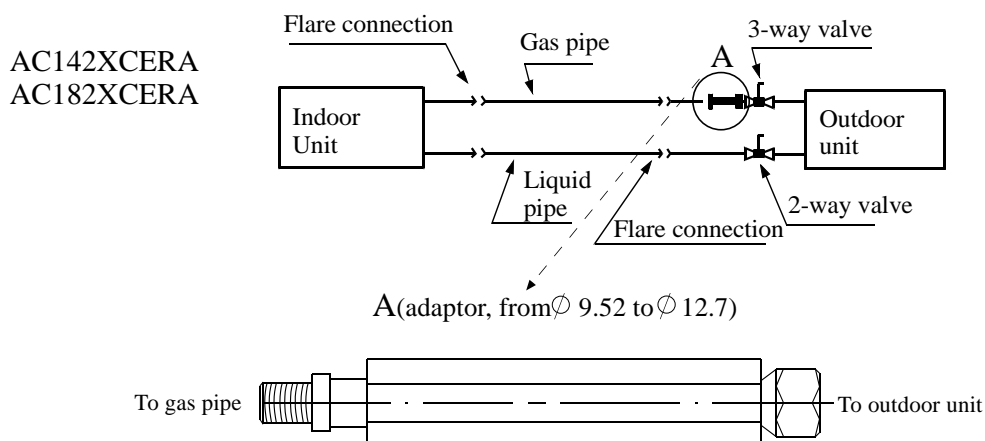
2. BENDING PIPES

The pipes are shaped by your hands. Be careful not to collapse them.

Fig. 21



3. PIPING CONNECTION



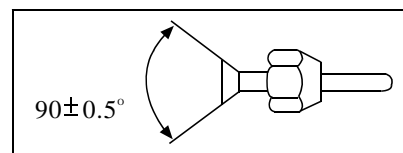
(1) Dimension of connecting pipe

AC142XCERA AC182XCERA	Gas pipe	$\phi 12.7\text{mm}$
	Liquid pipe	$\phi 6.35\text{mm}$

- Fit the nut on and fasten

(2) The maximum length and drop height of connecting pipe

- Please refer to the installation manual of outdoor unit
- To ensure the efficiency , Pipes shall be as short as possible.



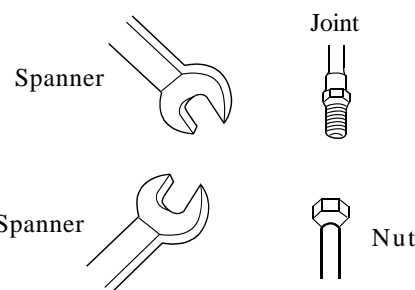
Cautions for piping connection

- Do not twist or deform the connecting pipe.
- Do not mix dusts.
- The bending radius shall be as large as possible.
- Both gas pipe and liquid pipe shall be heat insulation.
- No leakage in the flare.

(3) Piping connection

- Connecting method

Smear refrigerant oil on the joints of piping and flare.
The bending radius shall be as large as possible.
Align the pipe center when fastening, and tighten the nut, as shown in the figure.
Pay attention to not mix foreign matters such as sands in.



Diameter of Pipe	Tighten Torque (N.m)
Liquid Pipe 6.35mm	11.8
Gas Pipe 12.7mm	49.0

If not aligned ,tighten the nut by force will damage the nut that result in gas leakage

HOW TO CONNECT WIRING TO THE TERMINALS

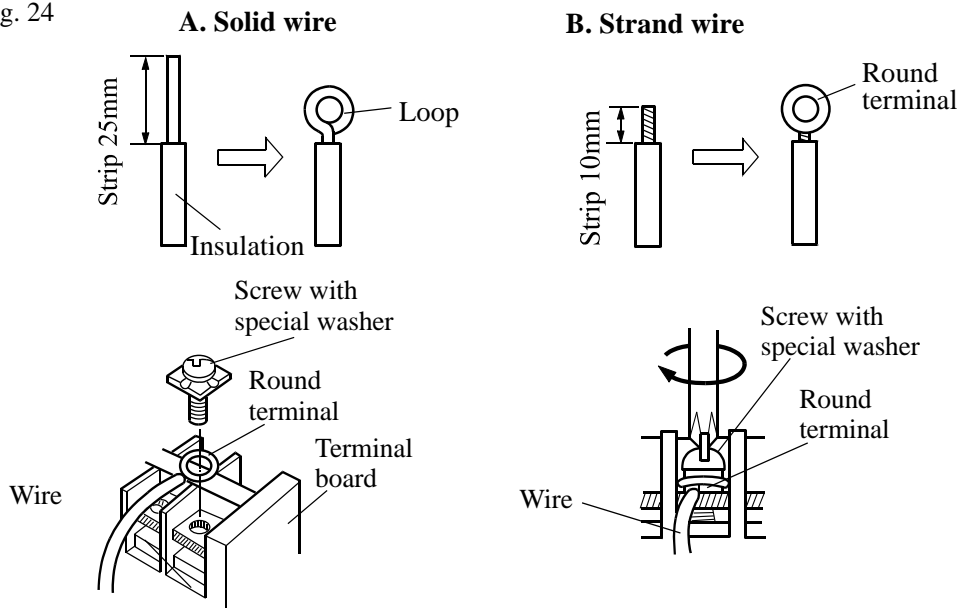
A. For solid core wiring (or F-cable)(Fig.24A)

- (1) Cut the wire with a wire cutter or wire-cutting pliers, then strip the insulation to about 25mm of the exposed solid wire.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
- (4) Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screw driver.

B. For strand wiring(Fig.24B)

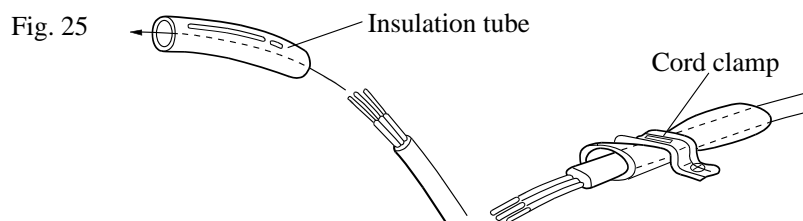
- (1) Cut the wire with a wire cutter or wire-cutting pliers, then strip the insulation to about 10mm of the exposed strand wiring.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.
- (4) Position the round terminal wire, and replace and tighten the terminal screw using a screw driver.

Fig. 24



HOW TO FIXED CONNECTION CORD AND POWER CABLE AT THE CORD CLAMP

After passing the connection cord and power cable through the insulation tube, fasten it with the cord clamp, as shown in Fig.25



Use VW-1, 0.5 to 1.0 mm thick, PVC tube as the insulation tube.

ELECTRICAL WIRING

⚠ CAUTION

- (1) Match the terminal block numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
- (2) Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.
- (3) Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed, electric leakage may occur.)
- (4) Always connect the ground wire.

1. INDOOR UNIT SIDE

(1) Remove the electric component box.

Fig. 26

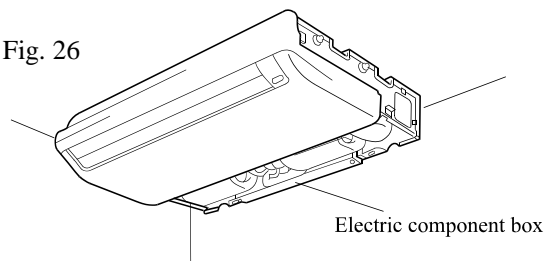
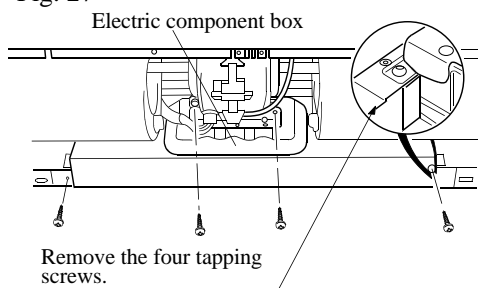


Fig. 27

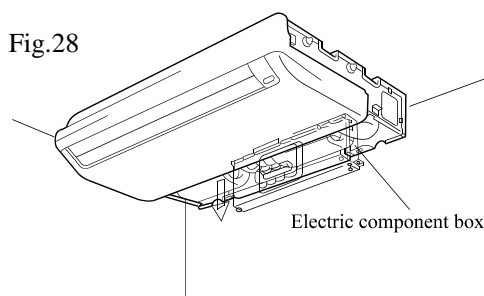


⚠ CAUTION

Do not remove the screws. If the screws are removed, the electric component box will fall.

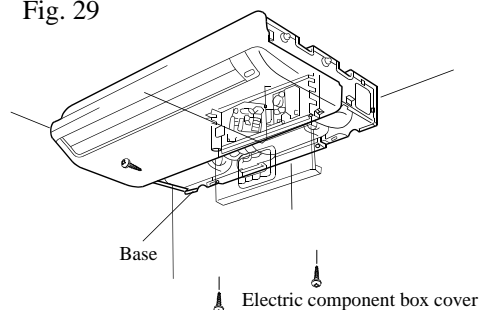
(2) Pull out the electric component box.

Fig.28



(3) Remove the electric component box cover.

Fig. 29



Remove the three tapping screws.

⚠ CAUTION

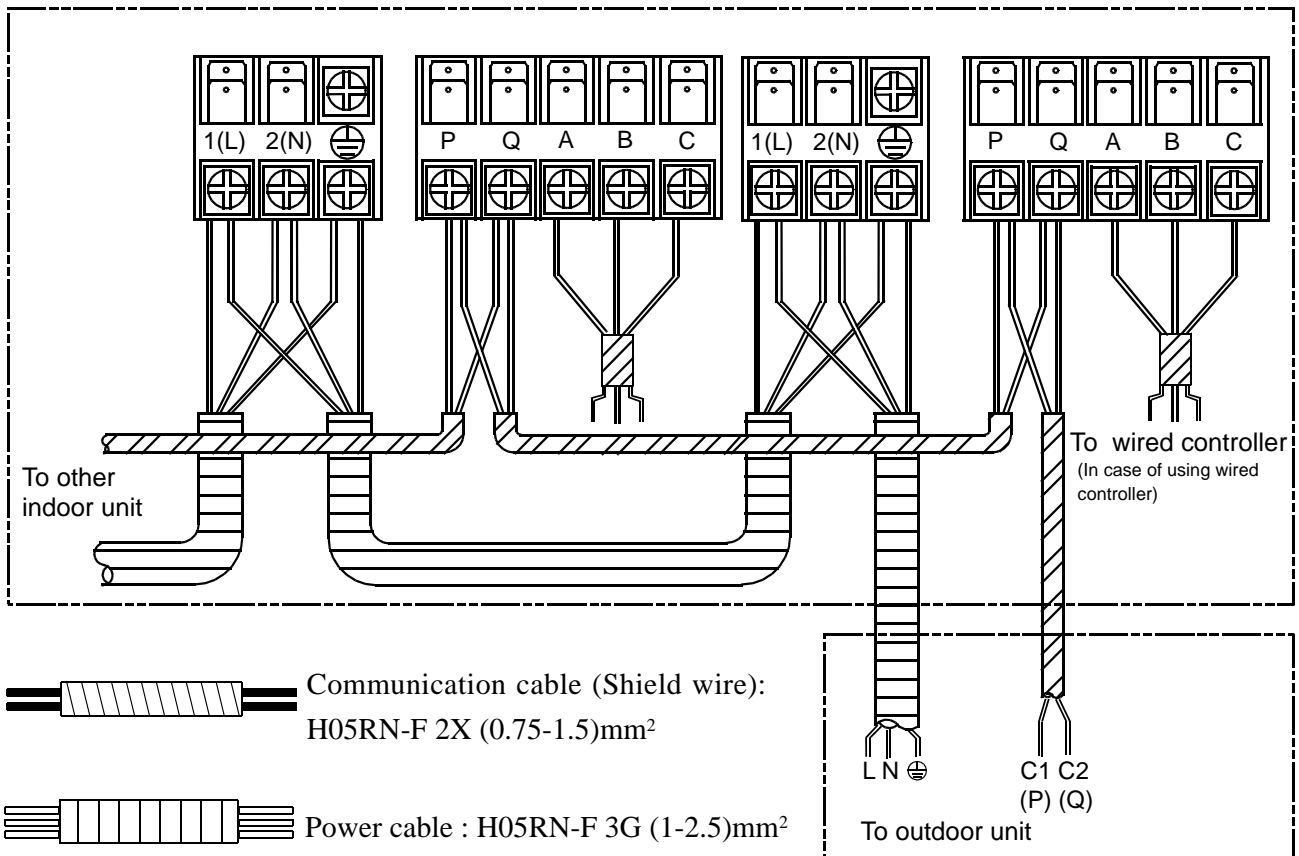
Be careful not to pinch the lead wires between the electric component box and base.

(4) Wiring

- (1) Remove the cord clamp.
- (2) Process the end of the connection cords to the dimensions shown in Fig.34.
- (3) Connect the end of the connection cord fully into the terminal block.
- (4) Fasten the connection cord with a cord clamp.
- (5) Fasten the end of the connection cord with the screw.

(5). Wiring of indoor unit

The distance between the signal wires and the power cables should be at least 50mm.



⚠ WARNING

1. Incorrect address setting will cause abnormal to the system.
2. Communication cable must be use sheilded type.
3. Communication cable and power cable must be use ring terminal type.

(6). Indoor unit communication addresses setting

CAUTION! FAIL TO DO THIS, THE UNIT WILL NOT WORK.

1. There are two methods to set the communication address

A. Use the remote controller (default status in first installation).

B. Use dip switches on the indoor unit PCB.

2. Address setting procedure when using the remote controller.

A. Set the addresses only after the successful installation of the refrigerant pipes and connecting cables, and open all the stop valves;

B. Please confirm that the indoor units and the outdoor unit in the same system use the same power source;

C. Power on the units, but put all the indoor units in the status of STANDBY;

D. Please note that the address must be set as following:

Indoor unit that connect to valve A, the address must be 1;

Indoor unit that connect to valve B, the address must be 2;

Indoor unit that connect to valve C, the address must be 3;

Indoor unit that connect to valve D, the address must be 4;

the LED board is blank.

E. Example: set unit A to address 1.

Continuously press the emergency switch for about 15 seconds, the buzzer will sound 4 times (PI PI PI PI) and then leave go of the switch. At this time, the indoor unit has entered the address setting procedure. But F. Use the controller to turn on the indoor unit. At this time, the controller should be changed from OFF to ON, and then the TIMER LED flashes once. That is to say, the address setting is enabled.

G. Press the button "SLEEP" on the controller, the times you press it stands for the address you want to set, detailed as following:

Press button "SLEEP" once, the address is "1", and the TIMER LED flashes once;

Press button "SLEEP" twice, the address is "2", and the TIMER LED flashes twice;

Press button "SLEEP" three times, the address is "3", and the TIMER LED flashes three times;

Press button "SLEEP" four times, the address is "4", and the TIMER LED flashes four times;

H. Use the remote controller to turn off the unit, At this time, the controller should be changed from ON to OFF, and the unit will exit the address setting procedure, the address will be memorized. The LED board will always display the address of this indoor unit until the system be powered off.

I. If you want to change the address, please repeat the above steps from E to G.

J. After setting all the addresses, please power off the system and then power on again. Otherwise the system will not start to work.

K. Once the addresses are successfully set, please do not change it any more to avoid confusion.

3. Address setting procedure when using the DIP switches SW01 and SW03.

A. The DIP switches SW01 and SW03 are on the indoor unit PCB.

B. Before carrying out the address setting work, the system must be powered off.

C. Take off the front panel and the filters, then take off the flaps and also the front cover, disconnect the swing motor connectors from the PCB and then take out the lower part of the PCB.

D. Change the position of DIP 7 of SW01 from OFF to ON, if fail to do this, the addresses set by SW03 will not work.

E. Use SW03 to set the addresses as following (DO NOT CHANGE OTHER DIP SWITCHES):

SW01	SW03	INDOOR UNIT ADDRESS																																																	
<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	1	
	1	2	3	4	5	6	7	8																																											
1	2	3	4	5	6	7	8																																												
<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	2	
1	2	3	4	5	6	7	8																																												
1	2	3	4	5	6	7	8																																												
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	3
1	2	3	4	5	6	7	8																																												
1	2	3	4	5	6	7	8																																												
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON</div> <div>OFF</div>	1	2	3	4	5	6	7	8																	4
1	2	3	4	5	6	7	8																																												
1	2	3	4	5	6	7	8																																												

4. How to check the addresses?

When finish all the above works, please power off and power on again to the whole system but set all the indoor units in STANDBY. Then continuously press the emergency switch until you hear the buzzer sound 5 times(Pi Pi Pi Pi Pi), and then the TIMER LED board will show the address of this indoor unit. Press any key on the remote controller, it will exit the address checking procedure.

(7).Setting method of temperature compensation (For heating function only)

Set method of temperature compensation(-8 °C~6 °C) in heating mode with the remote controller.

In 24 °C heating mode,press sleep 7 times continuously.Indoor buzzer sounds 2 times,that show temp.compensatoin works.Swith on the unit in heating mode by the remote controller,press the time button to set the set temp.compensatoin.so the set temp. compensation=the current set temp.-24 °C.For example,if the set temp. is 24 °C,the temp.compensation is 0 °C;if the set temp.is 25 °C,the temp. compensation is 1 °C;if the set temp.is 30 °C,the temp. compensation is 6 °C;if the settemp.is 23 °C,the temp. compensation is -1 °C;if the set temp.is 16 °C,the temp. compensation is -8 °C;If setting is finished, press ON/OFF button, then the unit quits the temp. compensation.

ELECTRICAL WIRING

⚠ WARNING

- (1) Always use a special branch circuit and install a special receptacle to supply power to the room air conditioner.
- (2) Use a circuit breaker and receptacle matched to the capacity of the room air conditioner.
- (3) The circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3mm between the contacts of each pole.
- (4) Perform wiring work in accordance with standards so that the room air conditioner can be operated safely and positively.
- (5) Install a leakage circuit breaker in accordance with the related laws and regulations and electric company standards.

⚠ CAUTION

- (1) The power source capacity must be the sum of the room air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
- (2) When the voltage is too low and the air conditioner is difficult to start, contact the power company the voltage raised.

TEST RUNNING

1. CHECK ITEMS

(1) INDOOR UNIT

- (1) Is operation of each button on the remote control unit normal?
- (2) Does each lamp light normally?
- (3) Do not air flow direction louvers operate normally?
- (4) Is the drain normal?

(2) OUTDOOR UNIT

- (1) Is there any abnormal noise and vibration during operation?
- (2) Will noise, wind, or drain water from the unit disturb the neighbors?
- (3) Is there any gas leakage?

CUSTOMER GUIDANCE

Explain the following to the customer in accordance with the operating manual:

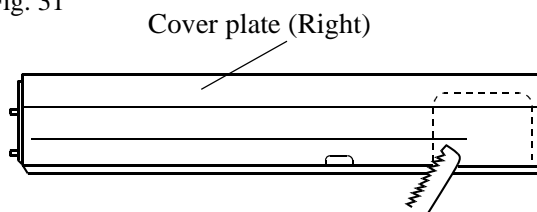
- (1) Starting and stopping method, operation switching, temperature adjustment, timer, air flow switching, and other remote control unit operations.
- (2) Air filter removal and cleaning, and how to use air louvers.
- (3) Give the operating and installation manuals to the customer.

MOUNT THE COVER PLATE AND THE INTAKE GRILL

1. Mount the cover plate. (Right)

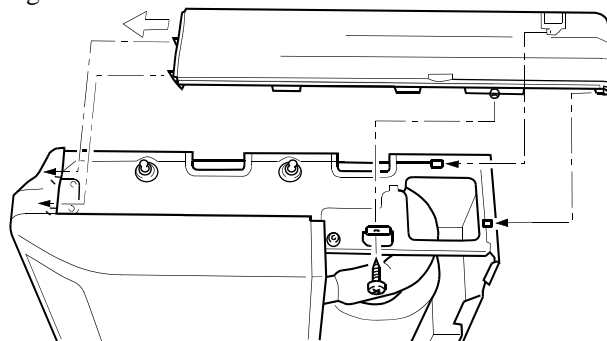
- (1) Cut a pipe exit hole in the right plate. This is only when the pipe exits from the right side. (This operation is not required when the protrusion is on the top or rear.)

Fig. 31



(2) Join the cover plates (right) and mount with screws.

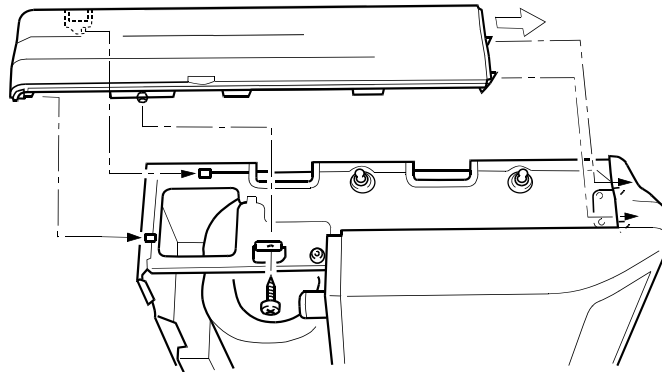
Fig. 32



2. Mount the cover plate.(Left)

- (1) Join the cover plate (left) and mount with screws.

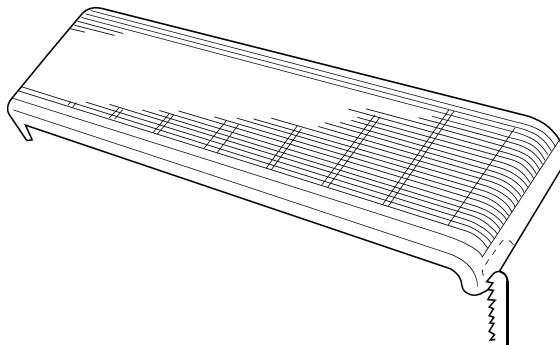
Fig. 33



3. Mount the intake grill.

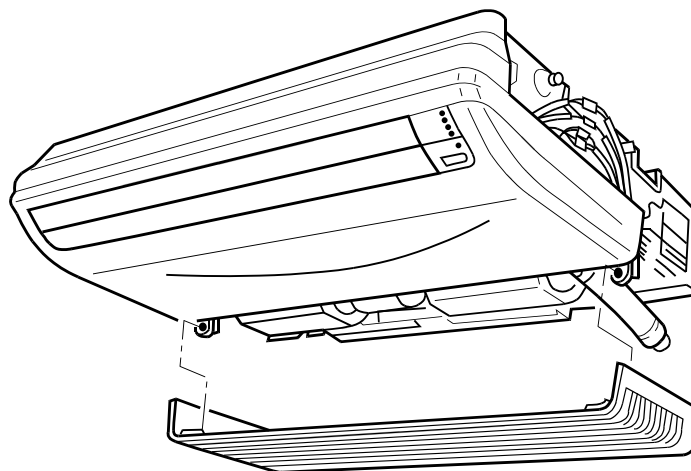
- (1) Cut the right side of the intake grill. This is only when the pipe exits from the right side

Fig. 34



- (2) Insert the hinges on the bottom of the intake grill into the holes in the base assembly. Then mount the arms to the three areas on the top of the intake grill.

Fig. 35



4.7 Duct type AD***XLERA

2. Preparation for installation

Installation tools

1	Screw Driver (flat head, wabbler, triangle)	8	Pipe Expander
2	Steel Saw	9	Knives
3	60mm Drill	10	Clippers
4	Inner Hexagon Spanner	11	Leakage Checker or Soap Liquid
5	Shifting Spanner	12	Measuring Tape
6	Spanner	13	Scraper or File
7	Pipe Cutter	14	Refrigeration Oil

3. Accessories for installation

Self-contained accessories

No.	A	B	C	D	E	F
Name of Parts	Non-adhesive Tape	Adhesive tape	Connecting Hose	Heat insulation material	Gypsum powder	Drain hose

4. Choose the installation place

- Install the indoor unit where the weight of the unit can be supported.
- Install the indoor unit where the heat source and steam source are not close and the unit inlet and outlet are not blocked.
- Install the indoor unit where the drainage is easy and the outdoor unit can be easily connected.
- Install the indoor unit where its cold air and hot air can be easily sent to all the corners of the room.
- Install the indoor unit where the power socket is near and there is sufficient space around the indoor unit.
- Install the indoor unit where there is no T.V set, radio set, and wireless appliance underneath, and the sunlight lamp is over one meter away.
- If the remote controller is installed on the wall, the indoor unit shall be ensured to receive the signal while the sunlight lamp is on.

5. Installation procedure

1. Drill a hole in the wall and insert the connecting pipe and wire through a PVC wall-through tube purchased locally. The wall hole shall be with a outward down slope of at least 1/100. (See Figure 1)
2. Before drilling check that there is no pipe or reinforcing bar just behind the drilling position. Drilling shall avoid at positions with electric wire or pipe.
3. Mount the unit on a strong and horizontal building roof. If the base is not firm, it will cause noise, vibration or pipe broken and refrigerant leakage (see Figure 6).
4. Support the unit firmly.
5. Change the form of the connection pipe, connection wire and drain pipe so that they can go through the wall hole easily.

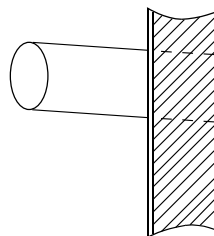


Fig 1

- When installing the ceiling concealed type indoor unit, a specially designed return air bellows shall be installed, as shown in Figure 3, Figure 4.

Figure 3

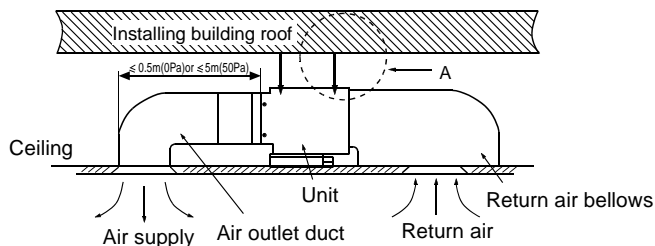
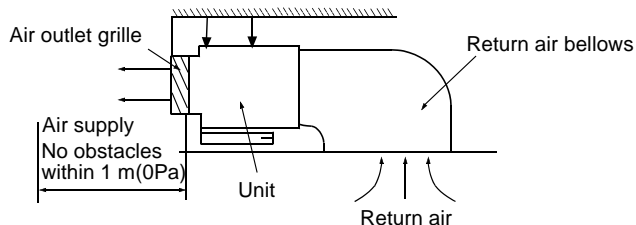


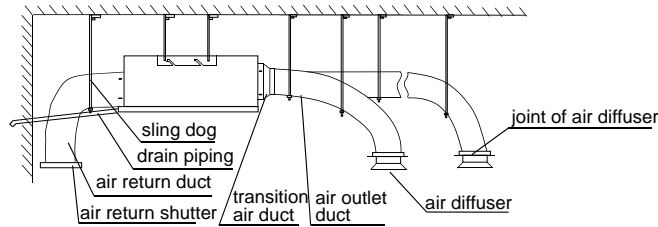
Figure 4



- Each air return and supply duct should fix to the floor precast slab by using an iron stand. Use glue to seal the interface closely. Recommend the distance between the air return duct and the wall is more than 150mm.

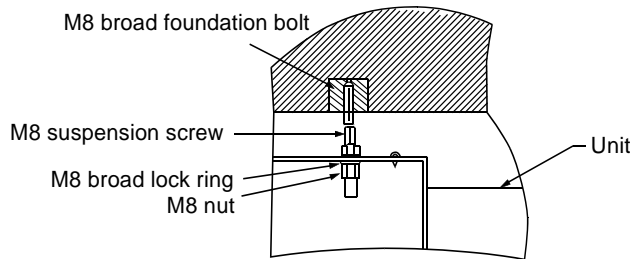
- The distance between air duct outlet and air conditioner outlet is according to the length of actually installed air duct and in service behavior of the static pressure terminal: Installation sketch map for long and short air duct is showed below, when connect to short air duct, using low static terminal (terminal color is white), the distance between air duct outlet and air conditioner outlet is no more than 0.5m; when connect to long air duct, using middle static terminal (terminal color is red), the distance between air duct outlet and air conditioner outlet could be within 5m at this point.

Figure 5



- Drain piping of condensed water should keep a downhill grade of 1% or more. Use insulating pipe to cover the drain piping of condensed water to keep warmth.
- As figure shown, suspend and install the unit.

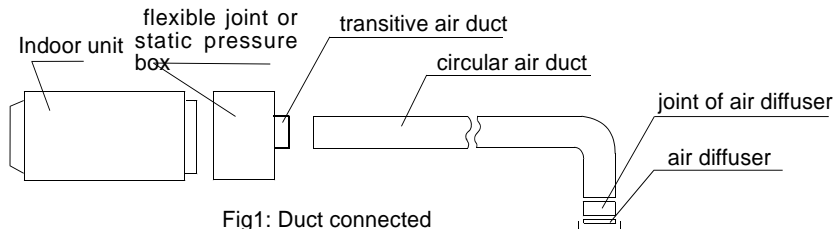
Figure 6



Installation for air duct of indoor unit

1. Installation of air discharge duct

- This type of unit uses circular air duct with its caliber of 180mm.
- An additional transitive air duct is necessary for the circular air duct to connect to the air supply inlet. It should be also connected to its respective air diffuser separately. See Fig.1. Adjust the wind speed of each air diffuser outlet to keep in line on the whole, so as to meet a demand of the air conditioner in the room.



2. Installation of air return duct

Use rivets to connect the air return duct to the air return inlet of the indoor unit. The other end connects to the air return shutter. as shown in Fig.2.

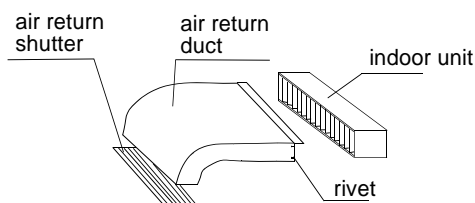


Fig2: Duct return connected

3. Air duct insulation

Insulation layer is needed for air supply and return duct. First, paste a glue nail to the air duct, and then attach the insulation cotton that has a tinfoil layer and use the glue nail cover to fix. Finally, seal the air duct interface with tinfoil adhesive tape closely. as shown in Fig3.

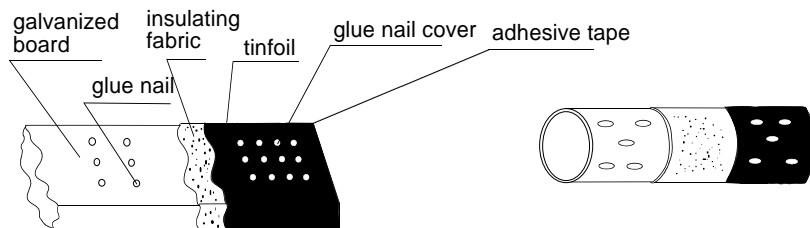


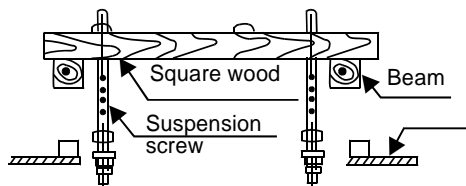
Fig3

Installing the suspension screw

Use M8 or M10 suspension screws (4, prepared in the field) (when the suspension screw height exceeds 0.9 m, M10 size is the only choice). These screws shall be installed as follows with space adapting to air conditioner overall dimensions according to the original building structures.

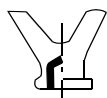
Wooden structure

A square wood shall be supported by the beams and then set the suspension screws.

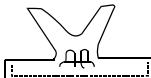


New concrete slab

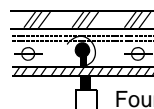
To set with embedded parts, foundation bolts etc.



Knife embedded part



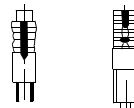
Guide plate embedded part



Iron reinforcement
Foundation bolt
Pipe suspension foundation bolt

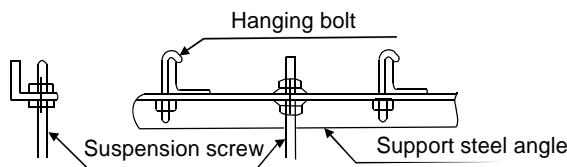
Original concrete slab

Use hole hinge, hole plunger or hole bolt.



Steel reinforcement structure

Use steel angle or new support steel angle directly.



Hanging of the indoor unit

Fasten the nut on the suspension screw and then hang the suspension screw in the Tslot of the suspension part of the unit.

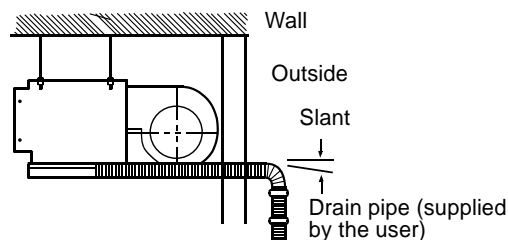
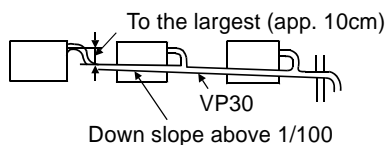
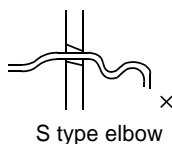
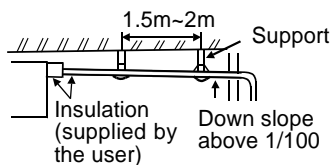
Aided with a level meter, adjust level of the unit within 5 mm.

⚠ CAUTION

In order to drain water normally, the drain pipe shall be processed as specified in the installation manual and shall be thermal insulated to avoid dew generation. Improper hose connection may cause indoor water leakage.

Requirements

- The indoor drain pipe shall be thermal insulated.
- The connection part between the drain pipe and the indoor unit shall be insulated so as to prevent dew generation.
- The drain pipe shall be slant downwards (greater than 1/100). The middle part shall not be of Stype elbow, otherwise abnormal sound will be produced.
- The horizontal length of the drain pipe shall be less than 20 m. In case of long pipe, supports shall be provided every 1.5 – 2m to prevent wavy form.
- Central piping shall be laid out according to the following figure.
- Take care not to apply external force onto the drain pipe connection part.



Pipe and insulation material

Pipe	Rigid PVC pipe VP31.5mm (internal diameter)
Insulation	Foamed PE with thickness above 7mm

Hose

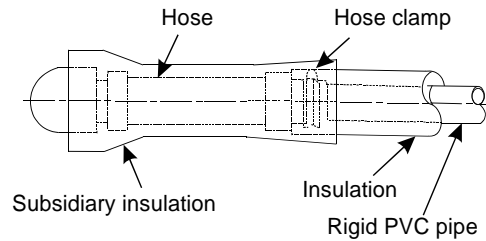
Drain pipe size: $\varnothing 19.05\text{mm}^2$ (3/4") PVC pipe.

The hose is used for adjusting the off-center and angle of the rigid PVC pipe.

- Directly stretch the hose to install without making any deformation.
- The soft end of the hose must be fastened with a hose clamp.
- Please apply the hose on horizontal part

Insulation treatment:

- Wrap the hose and its clamp until to the indoor unit without any clearance with insulating material, as shown in the figure.



Drain confirmation

During trial run, check that there is no leakage at the pipe connection part during water draining even in winter.

Allowable pipe length and drop

These parameters differ according to the outdoor unit. See the instruction manual attached with the outdoor unit for details.

Supplementary refrigerant

The refrigerant supplementation shall be as specified in the installation instructions attached with the outdoor unit. The added refrigerant shall be R22.

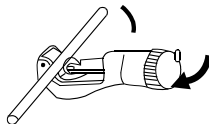
The adding procedure shall be aided with a measuring meter for a specified amount of supplemented refrigerant

Requirement

Overfilling or underfilling of refrigerant will cause compressor fault. The amount of the added refrigerant shall be as specified in the instructions.

Pipe cutting and expanding

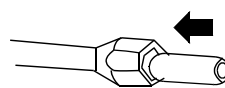
If the pipe is too long or the flare is damaged, it needs to be cut or expanded.



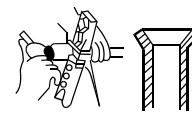
1. Pipe cutting



2. Removing burrs

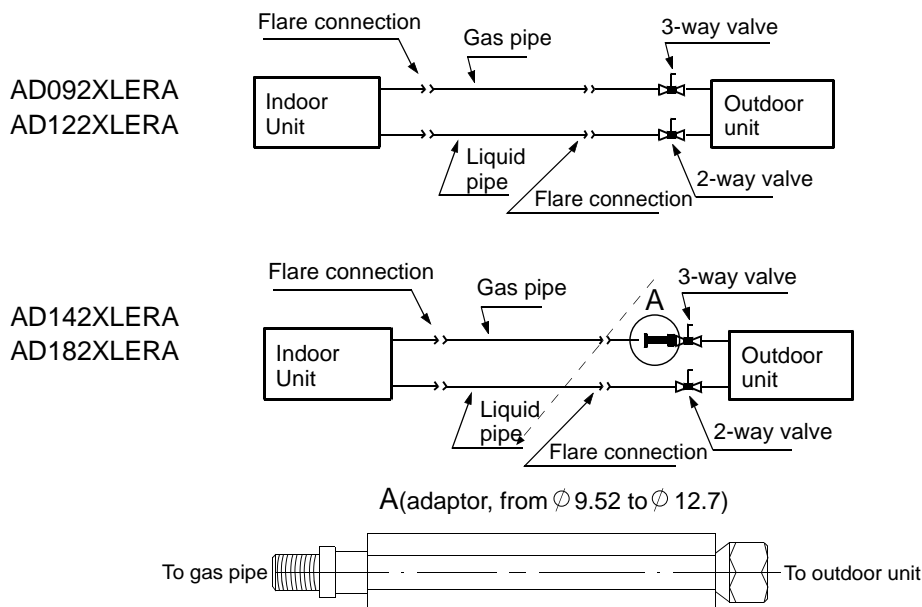


3. Insertion nut



4. Pipe expansion

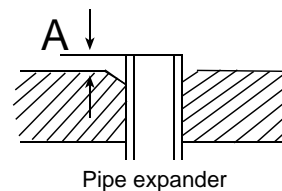
Piping Connection



Pipe expansion dimensions as follows:

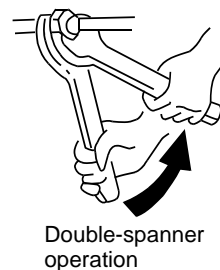
Pipe diameter ?	Size A (mm)
6.35 mm (1/4")	0.8 ~ 1.5
9.52 mm (3/8")	1.0 ~ 1.8
12.7 mm (1/2")	1.2 ~ 2.0

Correct	Incorrect				
	Slope	Damage	Bur	Partial	Overlong



- The connection of indoor unit pipes must use double spanners.
- The installing torque shall be as given in the following table.

Connecting pipe O.D.(mm)	Installing torque (N-m)	Increased installing torque (N-m)
? 6.35	11.8 (1.2kgf-m)	13.7 (1.4 kgf-m)
? 9.52	24.5 (2.5kgf-m)	29.4 (3.0 kgf-m)
? 12.70	49.0 (5.0 kgf-m)	53.9 (5.5 kgf-m)



1. Indoor unit communication addresses setting

CAUTION! FAIL TO DO THIS, THE UNIT WILL NOT WORK.

This kind of indoor units can only set the address by using the Dip Switches.

(1). Please note that the address must be set as following:

Indoor unit that connect to valve A, the address must be 1;

Indoor unit that connect to valve B, the address must be 2;

Indoor unit that connect to valve C, the address must be 3;

Indoor unit that connect to valve D, the address must be 4;

(2). Address setting procedure when using the DIP switches SW01 and SW03.

A. The DIP switches SW01 and SW03 are on the indoor unit PCB.

B. Change the position of DIP 7 of SW01 from OFF to ON, if fail to do this, the addresses set by SW03 will not work.

C. Use SW03 to set the addresses as following (DO NOT CHANGE OTHER DIP SWITCHES):

SW01	SW03	INDOOR UNIT ADDRESS	OUTDOOR VALVE
		1	A
		2	B
		3	C
		4	D

2. Installation check and trial operation

Check the Layout of the Drain Pipe and Connection Wires, and also the piping and address setting. The drain pipe should be placed underneath, and the connection wires should be placed upside; and the drain pipe especially the section inside the machine and indoors must be wound up with insulating material to preserve heat. The drain pipe shall be sloped and no concave and convex shall occur along the whole pipe. And the cases as the right figure indicates shall not occur.

3. Installation check

- Is power supply voltage required?
- Is water completely drained to outdoors?
- Are power wire and connection wires between indoor and outdoor units correctly connected?
- Is any gas leaked from the pipe connectors?
- Are series numbers of the terminals on the indoor and outdoor units corresponding to each other?
- Is the connection section of the auxiliary pipe insulated? Is the indoor unit fixed firmly?
- Is noise big?

4.Trial operation

The person who has completed this installation shall be requested to conduct a test operation for check:

Is the temperature adjuster working normally?

Does the location for installation conform to requirements?

Winding up with Protective Plastic Tape.The connection pipes,drain pipe, and the connection wires shall be wound up with PVC tape.

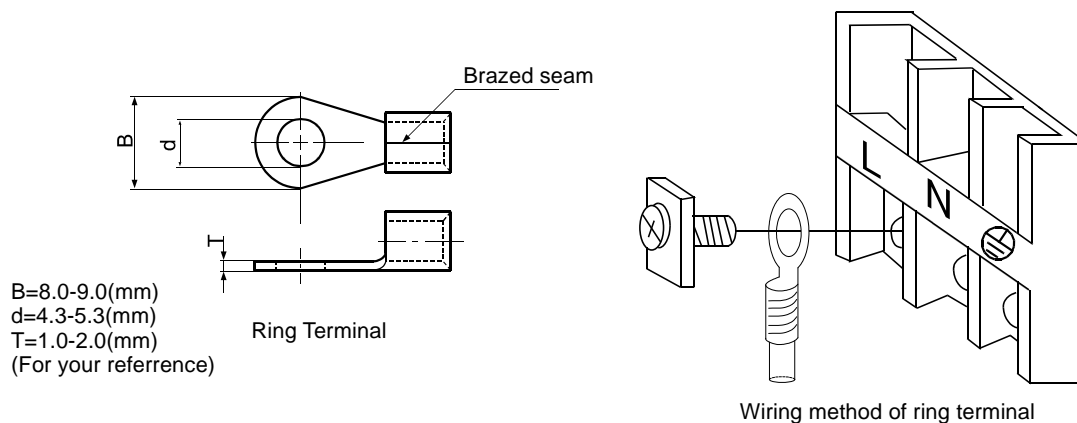
NOTE!

The connection pipes shall also be wound up with insulating material to preserve the temperature. The airing direction shall be from bottom to top.

Wiring methods:

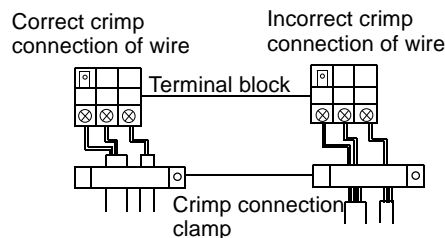
① Wiring method of ring terminal

For connecting line which end is a ring,its wiring method as shown in the right figure: remove wiring screw and pass it through the end ring of connecting line,then connect it to the terminal block and tighten screw.



② Wiring method of straight terminal

For connecting line which end is not a ring, its wiring method as follows: loosen wiring screw and insert the end of connecting line totally into the terminal block,then tighten the screw and pull the connecting line slightly to confirm that it is clamped firmly.

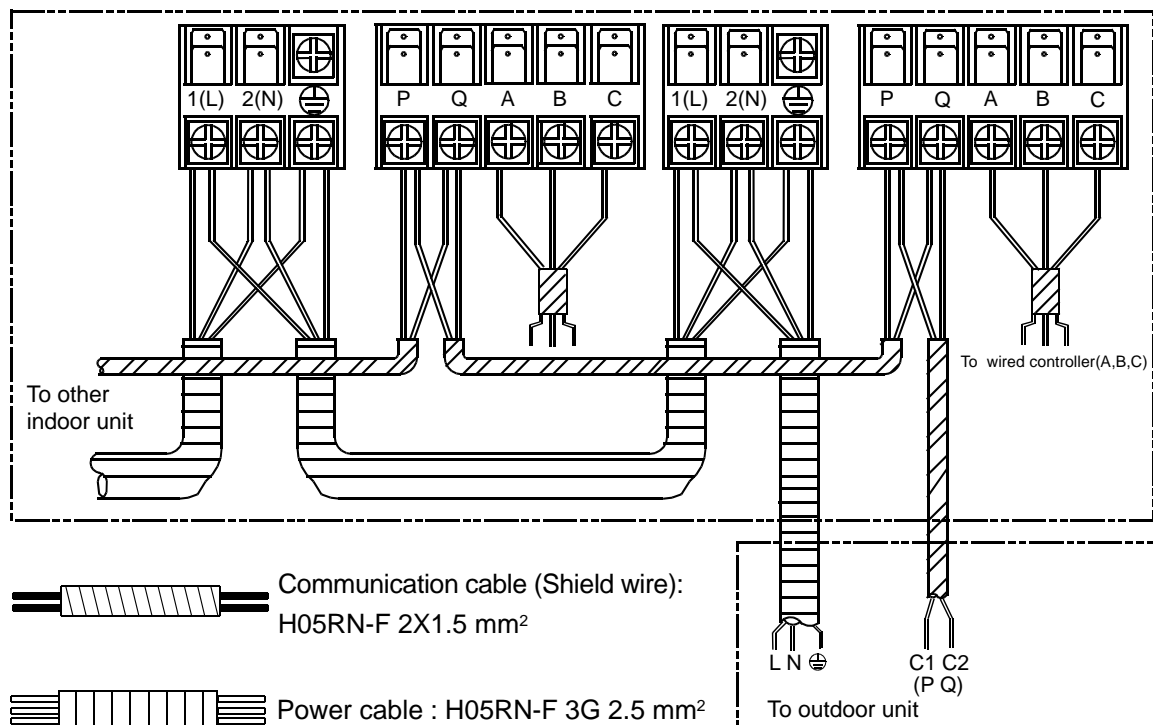


③ Crimp connection method of connecting line

After finishing wiring,connecting line must be fastened by wire clamp,which pressed on the external sheath of the connecting line, as shown in the right figure:

④ Wiring of indoor unit

The distance between the signal wires and the power cables should be at least 50mm.



Waring:

- 1.Incorrect address setting will cause abnormal to the system.
- 2.Communication cable must be use sheilded type.

4.8. Console type AF***XCERA

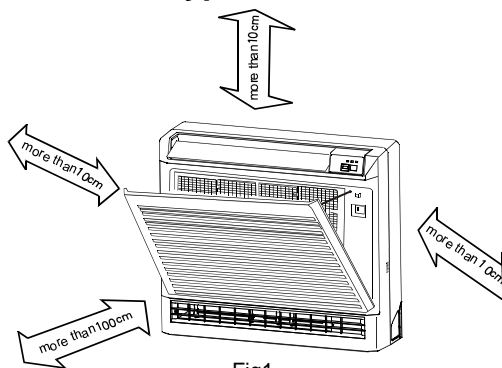


Fig1

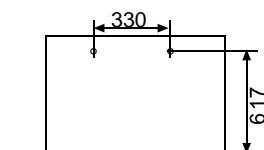


Fig2

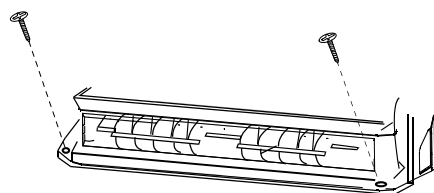


Fig3

Tool necessary

1. Screw driver
2. Hacksaw
3. 70mm dia.hole core drill
4. Spanner(dia. 17,27mm)
5. Spanner(14,17,27mm)
6. Pipe cutter
7. Flaring tool
8. Knife
9. Nipper
10. Gas leakage detector or soap water
11. Measuring tape
12. Reamer
13. Refrigerant oil

Installation of indoor unit

selection of installation place

- Place where it is easy to route drainage pipe and outdoor piping.
- Place ,away from heat source and with less direct sunlight.
- Place where cool and warm air could be delivered evenly to every corner of the room.
- Place near power supply socket.Leave enough space around the unit.
- Place ,robust not causing vibration,where the body can be supported sufficiently.
- To prevent interference, place it at least 1m away from other electric machines, such as TV set, radio.

Installing

- According to the dimension of the figure 2 shown, nail two cement steel nails on the wall,Keep 2~3mm out.then hang the back of the unit on them.
- There must be no gap between the indoor unit and wall.
- Remove the front panel,then use two expansible screws to fix the unit on the floor. As figure 3 shown.
- Once refrigerant piping and drain piping connections are complete,fill the gap of the throught hole with putty.
- Attach the front panel and front grille in their orignal positions once all connections are complete.

Fixing of the unit

1. Position of the wall hole

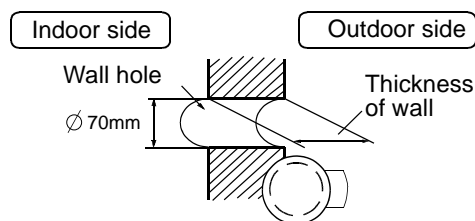
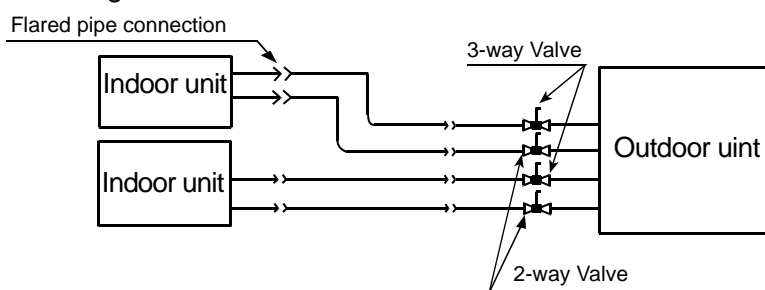
Wall hole should be decided according to installation place and piping direction. (refer to installation drawings).

2. Making a wall hole

Drill a hole of 120X70mm dia. with a little slope towards outside.

3. Piping connection

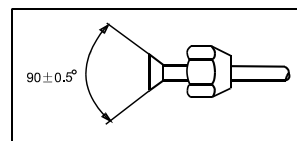
(1) Schematic diagram for unit connection



(Cross section of wall hole)

(2) Connection pipe dimensions:

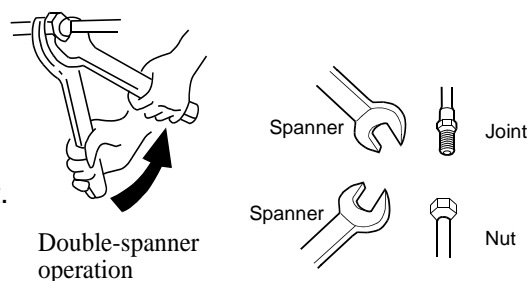
Pipe Value	Torque
Liquid 6.35mm	11.8 N·m
Gas 9.52mm	40 N·m



- Apply and tighten the nut.

(3) Cautions for pipe connection

- Pipes free from twists, deformation, water, dust. Dedicated tools for each R407C and R410A should be used and stored separately.
- Optimized radii of bends
- Insulation to be applied on all gaseous pipes
- Flared section free from cracks



Threads on the pipes may be damaged when tightening if the pipes are not well aligned.

(4) Pipe connection process

Apply refrigeration oil on the end of the pipe to be connected and on the flared section. Align the pipes to be connected and tighten the nut. (See the figure)
Ensure that no foreign articles enter into the pipes.

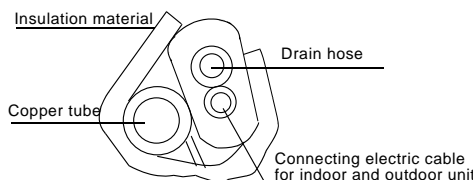
Piping connection of the indoor unit

1. Arrangement of piping and drainage pipe

After opening inlet grill, you will see a control box.

Remove the cover before working.

Cut away, with a hammer or a saw, the lid for piping according to piping direction.



According to the piping method, connect the piping on indoor unit with union of connection pipe.

Arrange the piping as per the wall hole and bind drain hose connecting electric cable and piping together with polyethylene tape.

Insert the bound piping connecting electric cable and drain hoses through wall hole to connect with outdoor unit.

2. Arrangement drain hose

Drain hose shall be placed in under place.

There should be a slope when arrange drain hose. Avoid up and down waves in drain hose.

If humidity is high, drain pipe(especially in room and indoor unit) must be covered with installation material.

Electric wiring :

Process of wire connections

1. Loop terminal

After removing the screw, fix the wire ring on the screw, reinsert the screw into the block terminal and then tighten the screw.

2. Straight terminal

After loosening the screw, inset the wire end into the block terminal and then tighten the screw. Slightly pull the wire to see if it is tightly fixed.

3. Wire capping

After completion of connection, capping clips must be applied on the external sleeve of the wires.

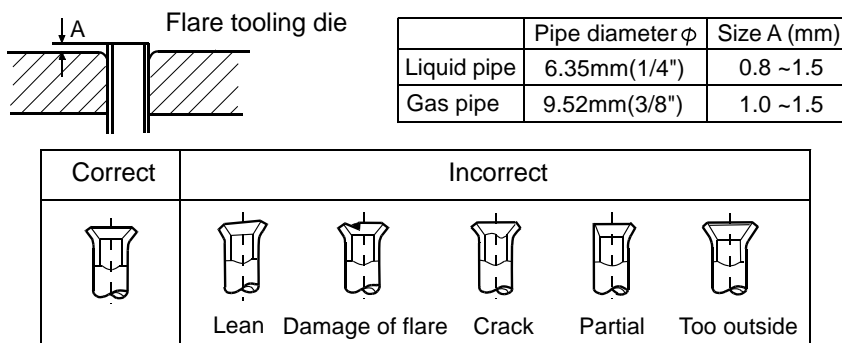
Others

1. Power supply requirements:

- Voltage: single-phase 1PH, 220-230V~, 50Hz
- Dedicated electrical cable should be installed by a qualified technician in accordance with the state regulation for electrical engineering.
- The power source must be grounded.
- A circuit breaker must be installed
- Electrical cables should be connected by "Y" method. Damaged or worn electrical cable must be replaced by authorized after sales agents.
- The power plug should be connected as follows: L for live line, N for neutral line and \oplus for grounding.
- Connection parameters: H05RN-F 3G(1.0-1.5)mm²
- Signal parameters: H05RN-F 2x(0.75-1.5)mm² (Shielded wire)
- The signal wire must be shielded wire.
- Cables for power supply, connection and signals are prepared by the owner.

2. Piping cutting and flaring

Be sure to carry out deburring after cutting with a pipe cutter.
Insert flaring tool to make a flare.



Installation inspection and test run:

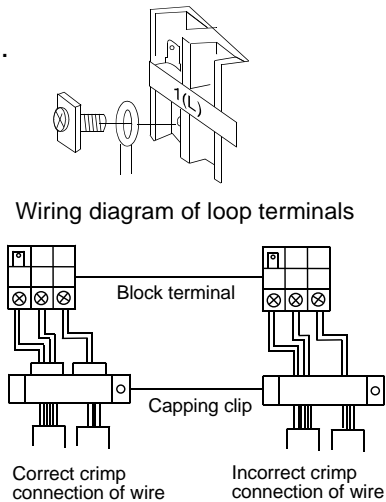
Please operate unit according to this Manual.

Items to be checked during test run. Please make a "✓" in "□"

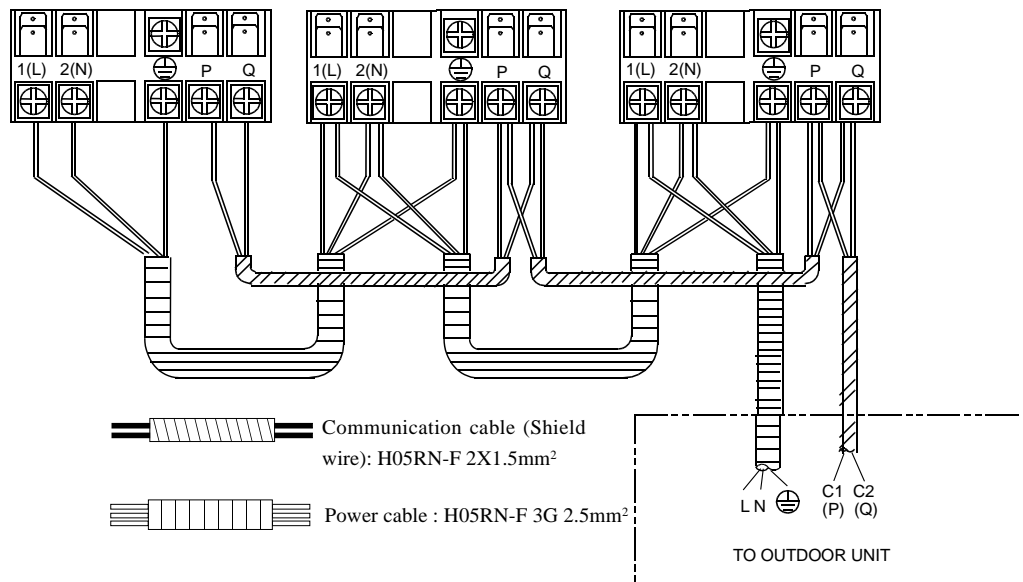
- ☐ Are there any gas leakage?
- ☐ How is insulation at piping connection carried out?
- ☐ Are electric wires of indoor and outdoor unit firmly inserted into terminal block?
- ☐ Is electric wiring of indoor and outdoor securely fixed?
- ☐ Is drainage securely carried out?
- ☐ Is earth line (grounding) securely connected?
- ☐ Is power supply voltage abided by the code?
- ☐ Is there any noise?
- ☐ Is control display normal?
- ☐ Is cooling operation normal?
- ☐ Is room temp. regulator normal?

Wiring of indoor unit

- Remove air intake screen and take out the front wires.
- Connect the wires as specified in the above methods and diagrams for indoor unit and wire connections.
- Properly apply capping clips on the wires.
- Replace the air intake screen.
- Do not link the connecting and signal wire with the same cable, a snug space must be maintained between connecting and signal wires.
- Shield of the signal wire should be spot grounded.



Wiring connection:



⚠ WARNING

Incorrect address setting will cause abnormal to the system.
 Communication cable must be use sheilded type.
 Incorrect address setting will cause abnormal to the system.and then put it down perpendicularly.
 Signal connecting cable must be sheilded type.
 The distance between the signal wires and the power cabes should be at least 50mm.

Indoor unit communication addresses setting

CAUTION! FAIL TO DO THIS, THE UNIT WILL NOT WORK.

1. There are two methods to set the communication address
 - A. Use the remote controller (default status in first installation).
 - B. Use dip switches on the indoor unit PCB.
2. Address setting procedure when using the remote controller.
 - A. Set the addresses only after the successful installation of the refrigerant pipes and connecting cables, and open all the stop valves;
 - B. Please confirm that the indoor units and the outdoor unit in the same system use the same power source;
 - C. Power on the units, but put all the indoor units in the status of STANDBY;
 - D. Please note that the address must be set as following:
 - Indoor unit that connect to valve A, the address must be 1;**
 - Indoor unit that connect to valve B, the address must be 2;**
 - Indoor unit that connect to valve C, the address must be 3;**
 - Indoor unit that connect to valve D, the address must be 4;**
 - E. Example: set unit A to address 1.
Continuously press the emergency switch for about 15 seconds, the buzzer will sound 4 times (PI PI PI PI) and then leave go of the switch. At this time, the indoor unit has entered the address setting procedure. But the LED board is blank.
 - F. Use the controller to turn on the indoor unit. At this time, the controller should be changed from OFF to ON, and then the TIMER LED flashes once. That is to say, the address setting is enabled.
 - G. Press the button "SLEEP" on the controller, the times you press it stands for the address you want to set, detailed as following:
 - Press button "SLEEP" once, the address is "1", and the TIMER LED flashes once;
 - Press button "SLEEP" twice, the address is "2", and the TIMER LED flashes twice;
 - Press button "SLEEP" three times, the address is "3", and the TIMER LED flashes three times;
 - Press button "SLEEP" four times, the address is "4", and the TIMER LED flashes four times;
 - H. Use the remote controller to turn off the unit. At this time, the controller should be changed from ON to OFF, and the unit will exit the address setting procedure, the address will be memorized. The LED board will always display the address of this indoor unit until the system be powered off.
 - I. If you want to change the address, please repeat the above steps from E to G.
 - J. After setting all the addresses, please power off the system and then power on again. Otherwise the system will not start to work.
 - K. Once the addresses are successfully set, please do not change it any more to avoid confusion.
3. Address setting procedure when using the DIP switches SW01 and SW02.
 - A. The DIP switches SW01 and SW02 are on the indoor unit PCB.
 - B. Before carrying out the address setting work, the system must be powered off.
 - C. Take off the front panel and the filters, then take off the flaps and also the front cover, disconnect the swing motor connectors from the PCB and then take out the lower part of the PCB.
 - D. Change the position of DIP 1 of SW01 from OFF to ON, if fail to do this, the addresses set by SW02 will not work.
 - E. Use SW02 to set the addresses as following (DO NOT CHANGE OTHER DIP SWITCHES):

SW01	SW02	INDOOR UNIT ADDRESS																																																
<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td>■</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>ON OFF</div>	1	2	3	4	5	6	7	8	■																<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>■</td><td>■</td><td></td></tr></table> <div>ON OFF</div>	1	2	3	4	5	6	7	8														■	■		1
1	2	3	4	5	6	7	8																																											
■																																																		
1	2	3	4	5	6	7	8																																											
					■	■																																												
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>■</td><td>■</td><td></td></tr></table> <div>ON OFF</div>	1	2	3	4	5	6	7	8														■	■		2																								
1	2	3	4	5	6	7	8																																											
					■	■																																												
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>■</td><td></td><td>■</td></tr></table> <div>ON OFF</div>	1	2	3	4	5	6	7	8														■		■	3																								
1	2	3	4	5	6	7	8																																											
					■		■																																											
	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>■</td><td></td><td>■</td></tr></table> <div>ON OFF</div>	1	2	3	4	5	6	7	8														■		■	4																								
1	2	3	4	5	6	7	8																																											
					■		■																																											

How to check the addresses?

When finish all the above works, please power off and power on again to the whole system but set all the indoor units in STANDBY. Then continuously press the emergency switch until you hear the buzzer sound 5 times(Pi Pi Pi Pi Pi), and then the LCD display board will show the address of this indoor unit.

Press any key on the remote controller, it will exit the address checking procedure.

4.9. Wall mounted type AS***XVERA

PRECAUTION

- Execute proper grounding. Do not connect the earth wire to a gas pipe, water pipe, lightening rod, or a telephone ground wire. Improper placement of earth wires can result in electric shock.
- An electric leakage breaker must be installed, otherwise electric shock or other accidents would occur.
- After completion of the installation, the air conditioner shall be electrified to check for electric leakage.

2. Preparation for installation

Installation tools

1	Screw Driver (flat head, wabblers, triangle)	8	Pipe Expander
2	Steel Saw	9	Knives
3	60mm Drill	10	Clippers
4	Inner Hexagon Spanner	11	Leakage Checker or Soap Liquid
5	Shifting Spanner	12	Measuring Tape
6	Spanner	13	Scraper or File
7	Pipe Cutter	14	Refrigeration Oil

3. Accessories for installation

Self-contained accessories

No.	A	B	C	D	E	F
Name of Parts	Non-adhesive Tape	Adhesive tape	Connecting Hose	Heat insulation material	Gypsum powder	Drain hose

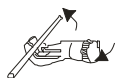
4. Choose the installation place

- Install the indoor unit where the weight of the unit can be supported.
- Install the indoor unit where the heat source and steam source are not close and the unit inlet and outlet are not blocked.
- Install the indoor unit where the drainage is easy and the outdoor unit can be easily connected.
- Install the indoor unit where its cold air and hot air can be easily sent to all the comers of the room.
- Install the indoor unit where the power socket is near and there is sufficient space around the indoor unit.
- Install the indoor unit where there is no T.V set, radio set, and wireless appliance underneath, and the sunlight lamp is over one meter away.
- If the remote controller is installed on the wall, the indoor unit shall be ensured to receive the signal while the sunlight lamp is on.

5. Method for Cutting and Expanding Pipes.

When the pipe is too long or the mouth is damaged, the pipe needs to cut or expanded.

1. cutting hose



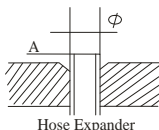
2. Removing burr



3. Put on nut



4. Expand Hose



Hose Expander

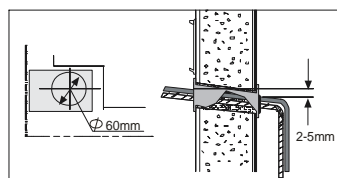
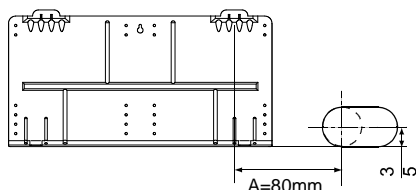
Expansion Size

Hose dia. Φ	Size (mm)A
6.35 mm (1/4)	0.8-1.5
9.52 mm (3/8)	1.0-1.5

Correct	Not Correct					
	Tilting	cracks on expanded mouth	burr	incomplete	too long	

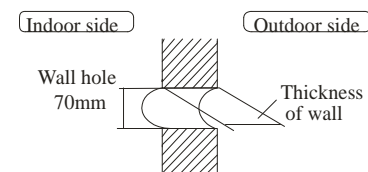
6. When the mounting plate is first fixed

1. Carry out, based on the neighboring pillars or lintels, a proper leveling for the plate to be fixed against the wall, then temporarily fasten the plate with one steel nail.
2. Make sure once more the proper level of the plate, by hanging a thread with a weight from the central top of the plate, then fasten securely the plate with the attachment steel nail.

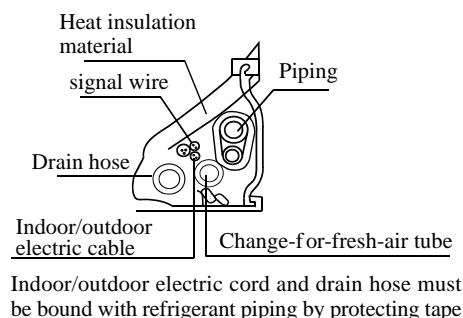
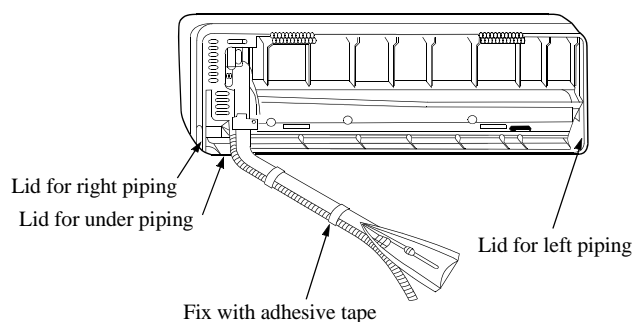


3. Making a Hole on the wall and Fitting the piping Hole cover.

- Make a hole of 60mm in diameter, slightly descending to outside the wall.
 - Install piping hole cover and seal it off with putty after installation.
4. Drawing of pipe Rear piping
- Draw pipes and the drain hose, then fasten them with the adhesive tape. Left Left-rear, piping.
- In case of left side piping, cut away, with a nipper, the lid for left piping.
 - In case of left-rear piping, bend the pipes according to the piping direction to the mark of hole for left-rear piping which is marked on heat insulation materials.
- (1) Insert the drain hose into the dent of heat insulation materials of indoor unit.
 - (2) Insert the indoor/outdoor electric cord from backside of indoor unit, and pull it out on the front side, then connect them.
 - (3) Coat the flaring seal face with refrigerant oil and connect pipes.
- Cover the connection part with heat insulation materials closely, and make sure fixing with adhesive tape.



(Section of wall hole) Piping hole pipe



7. Other direction piping

- Cut away, with a nipper, the lid for piping according to the piping direction and then bend the pipe according to the position of wall hole. When bending, be careful not to crash pipes.
- Connect beforehand the indoor/outdoor electric cable, and then pull out the connected to the heat insulation of connecting part specially.
- Hang surely the unit body onto the upper notches of the mounting plate. Move the body from side to verify its secure fixing.
- In order to fix the body onto the mounting plate, hold up the body aslant from the underside and then put it down perpendicularly.

8. Indoor unit communication addresses setting

CAUTION! FAIL TO DO THIS, THE UNIT WILL NOT WORK.

1. There are two methods to set the communication address

A. Use the remote controller (default status in first installation).

B. Use dip switches on the indoor unit PCB.

2. Address setting procedure when using the remote controller.

A. Set the addresses only after the successful installation of the refrigerant pipes and connecting cables, and open all the stop valves;

B. Please confirm that the indoor units and the outdoor unit in the same system use the same power source;

C. Power on the units, but put all the indoor units in the status of STANDBY;

D. Please note that the address must be set as following:

Indoor unit that connect to valve A, the address must be 1;

Indoor unit that connect to valve B, the address must be 2;

Indoor unit that connect to valve C, the address must be 3;

E. Example: set unit A to address 1.

Continuously press the emergency switch for about 15 seconds, the buzzer will sound 4 times (PI PI PI PI) and then leave go of the switch. At this time, the indoor unit has entered the address setting procedure. But the LCD display board is blank.

F. Use the controller to turn on the indoor unit. At this time, the controller should be changed from OFF to ON, and then the LCD display board will display number "1". That is to say, the address setting is enabled.

G. Press the button "SLEEP" on the controller, the times you press it stands for the address you want to set, detailed as following:

Press button "SLEEP" one time, the address is "1", and the LCD display board shows "1";

Press button "SLEEP" two times, the address is "2", and the LCD display board shows "2";

Press button "SLEEP" three times, the address is "3", and the LCD display board shows "3";

H. Use the remote controller to turn off the unit, At this time, the controller should be changed from ON to OFF, and the unit will exit the address setting procedure, the address will be memorized. The LCD display board will always display the address of this indoor unit until the system be powered off.

- I. If you want to change the address, please repeat the above steps from E to G.
 J. After setting all the addresses, please power off the system and then power on again. Otherwise the system will not start to work.
 K. Once the addresses are successfully set, please do not change it any more to avoid confusion.
 3. Address setting procedure when using the DIP switches SW01 and SW02.
 A. The DIP switches SW01 and SW02 are on the indoor unit PCB.
 B. Before carrying out the address setting work, the system must be powered off.
 C. Take off the front panel and the filters, then take off the flaps and also the front cover, disconnect the swing motor connectors from the PCB and then take out the lower part of the PCB.
 D. Change the position of DIP 1 of SW01 from OFF to ON, if fail to do this, the addresses set by SW02 will not work.
 E. Use SW02 to set the addresses as following(DO NOT CHANGE OTHER DIP SWITCHES):

SW01								SW02								INDOOR UNIT ADDRESS	
1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	ON	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OFF	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3	4	5	6	7	8	ON	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OFF	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3	4	5	6	7	8	ON	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OFF	

4. How to check the addresses?

When finish all the above works, please power off and power on again to the whole system but set all the indoor units in STANDBY. Then continuously press the emergency switch until you hear the buzzer sound 5 times(Pi Pi Pi Pi Pi), and then the LCD display board will show the address of this indoor unit. Press any key on the remote controller, it will exit the address checking procedure.

8. Installation check and trial operation

Check the Layout of the Drain Pipe and Connection Wires, and also the piping and address setting. The drain pipe should be placed underneath, and the connection wires should be placed upside; and the drain pipe especially the section inside the machine and indoors must be wound up with insulating material to preserve heat. The drain pipe shall be sloped and no concave and convex shall occur along the whole pipe. And the cases as the right figure indicates shall not occur.

9. Installation check

- Is power supply voltage required?
- Is water completely drained to outdoors?
- Are power wire and connection wires between indoor and outdoor units correctly connected?
- Is any gas leaked from the pipe connectors?
- Are series numbers of the terminals on the indoor and outdoor units corresponding to each other?
- Is the connection section of the auxiliary pipe insulated? Is the indoor unit fixed firmly?
- Is noise big?

10. Trial operation

The person who has completed this installation shall be requested to conduct a test operation for check:

- Is the temperature adjuster working normally?
- Does the location for installation conform to requirements?

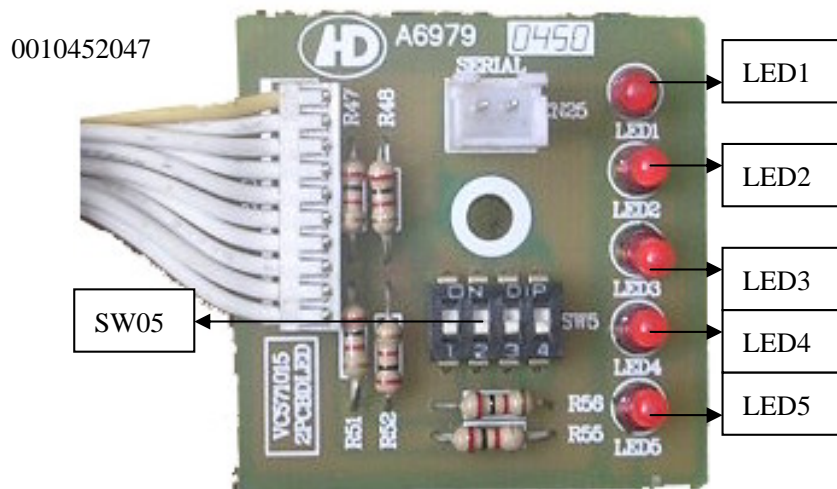
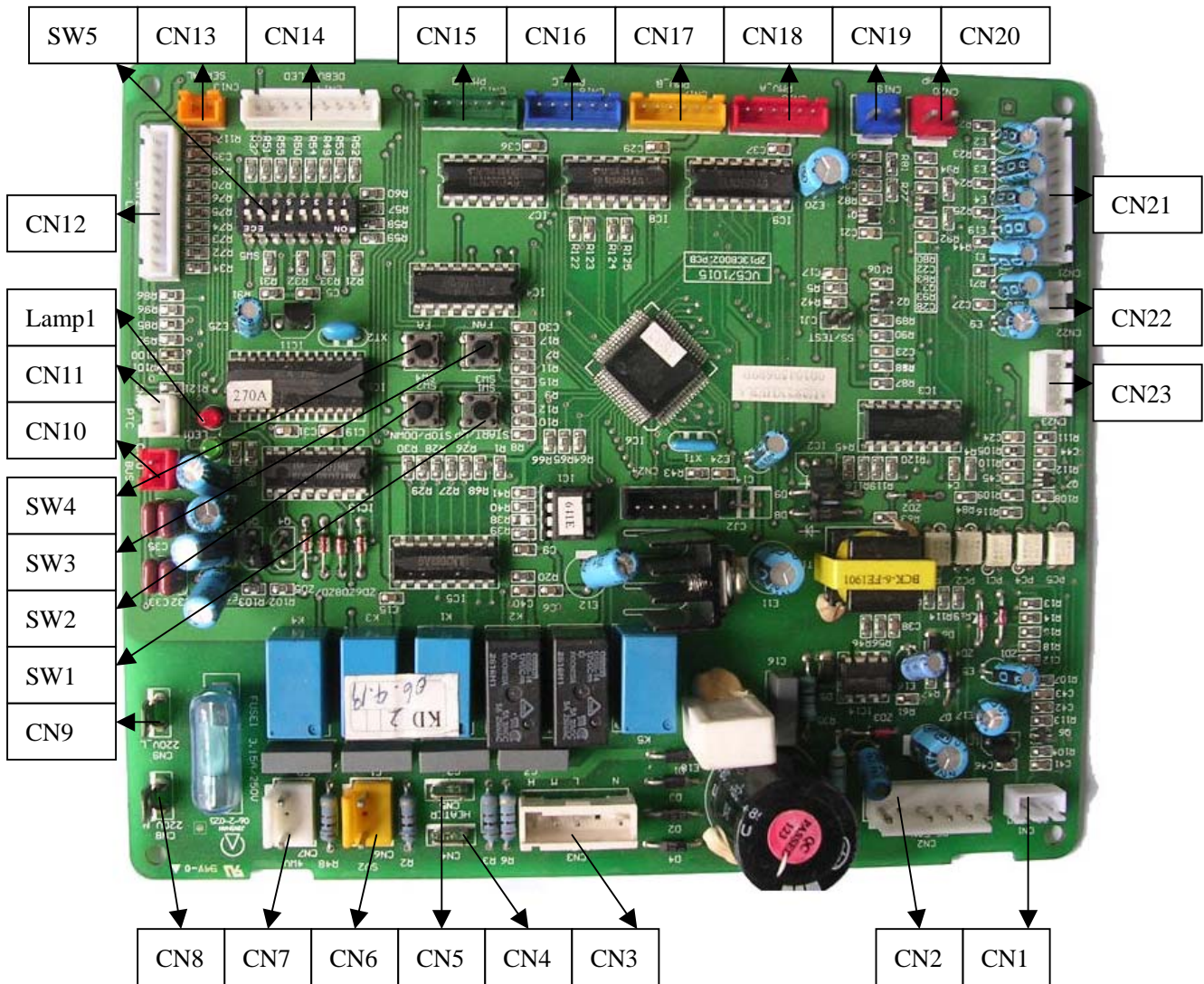
Winding up with Protective Plastic Tape. The connection pipes, drain pipe, and the connection wires shall be wound up with PVC tape.

Notes: The connection pipes shall also be wound up with insulating material to preserve the temperature. The airing direction shall be from bottom to top.

5. PCB photo,Wiring diagram and function description

5.1 Outdoor unit

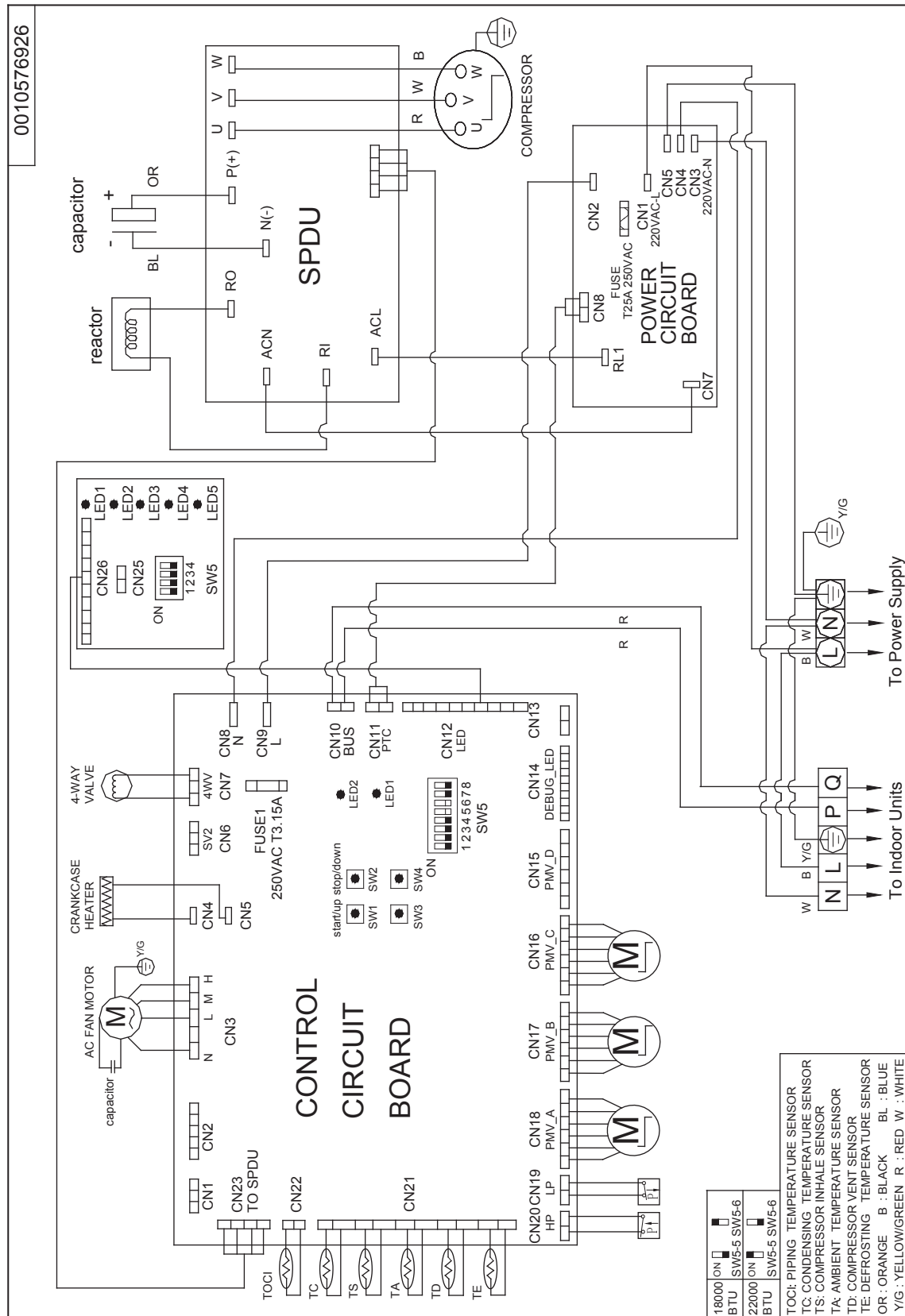
5.1.1. Outdoor PCB photo



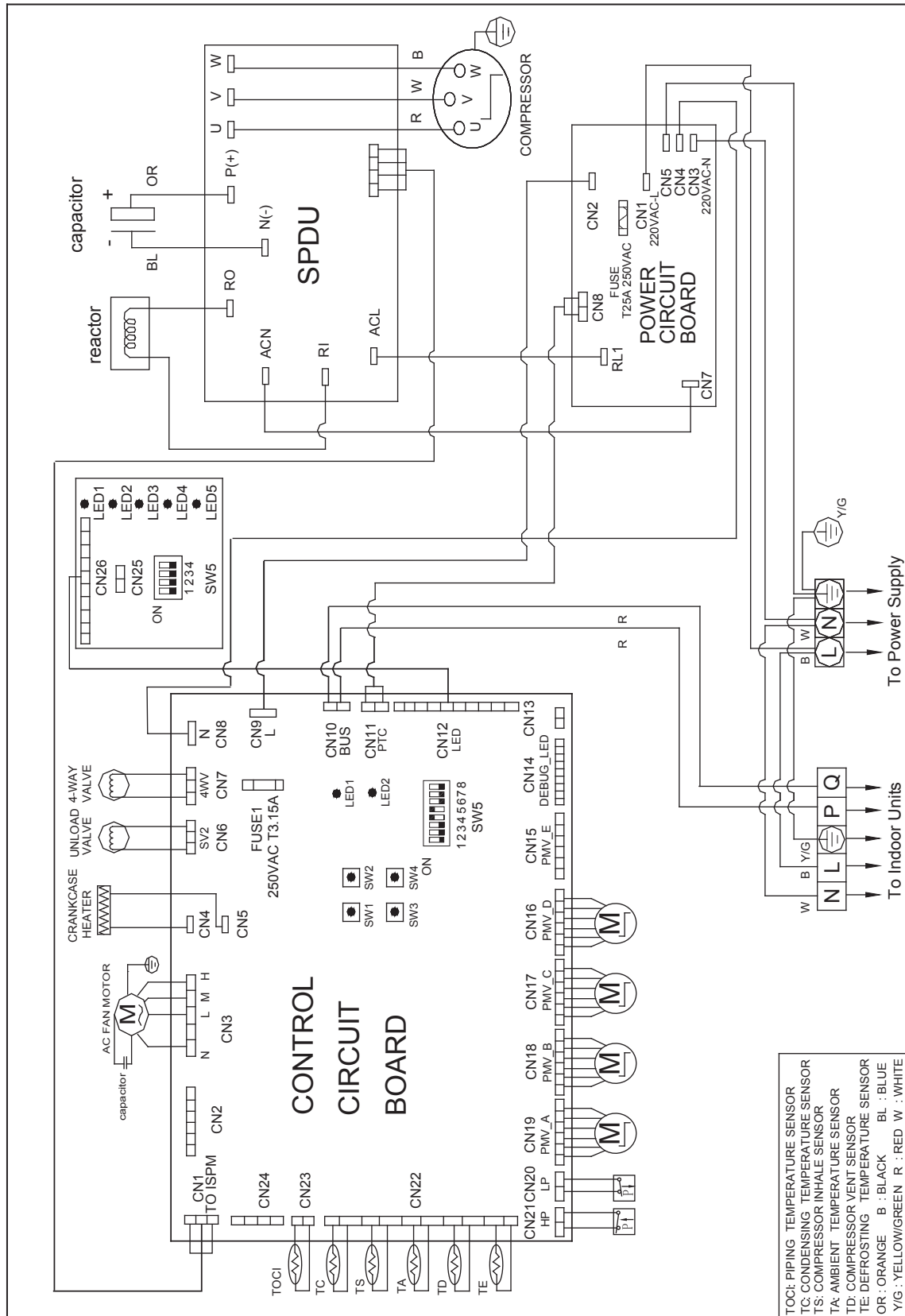
SW05 is used for factory quality control engineers, the default position is : OFF OFF OFF OFF

5.1.2. Wiring diagram

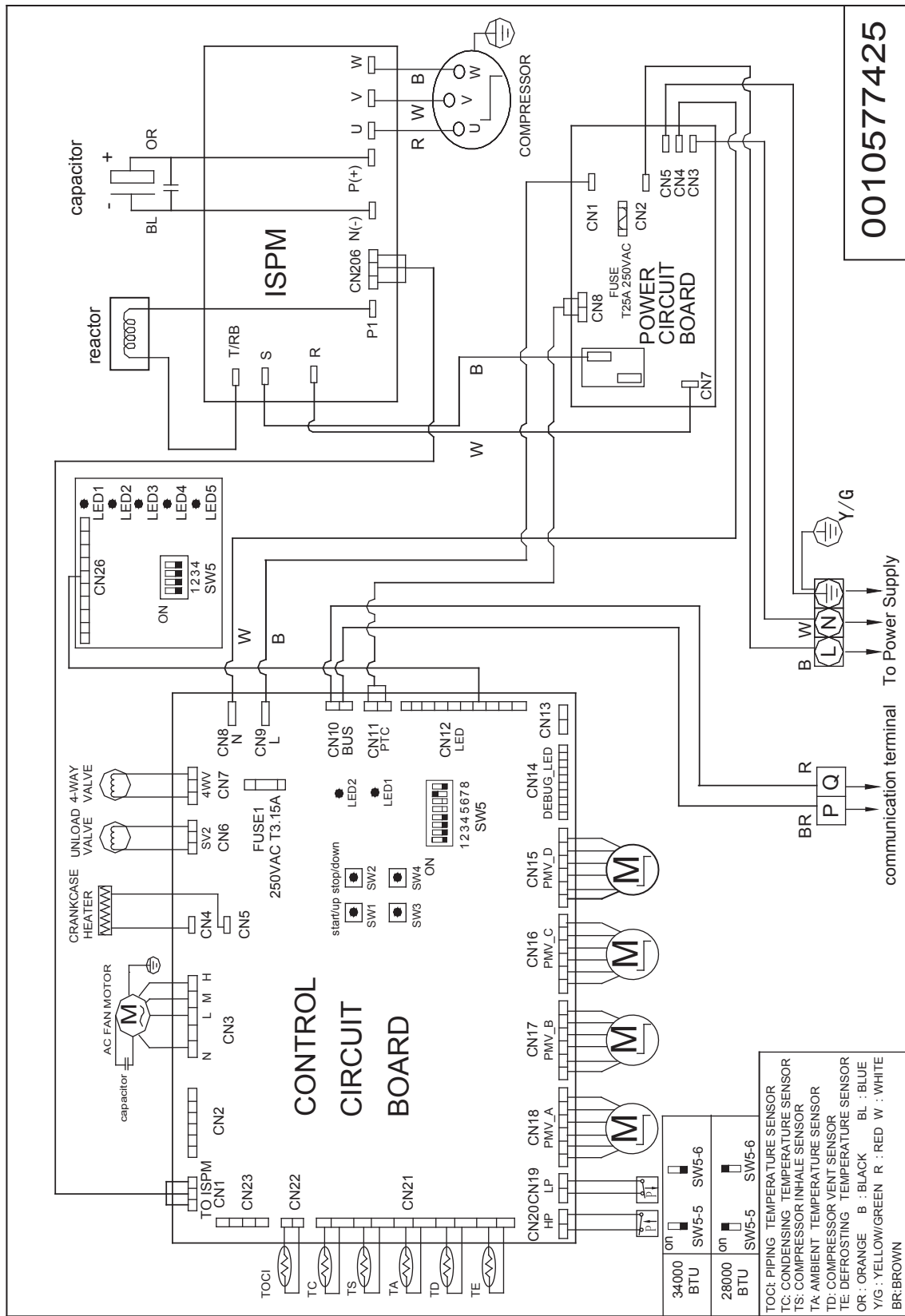
AU182\222XFERA



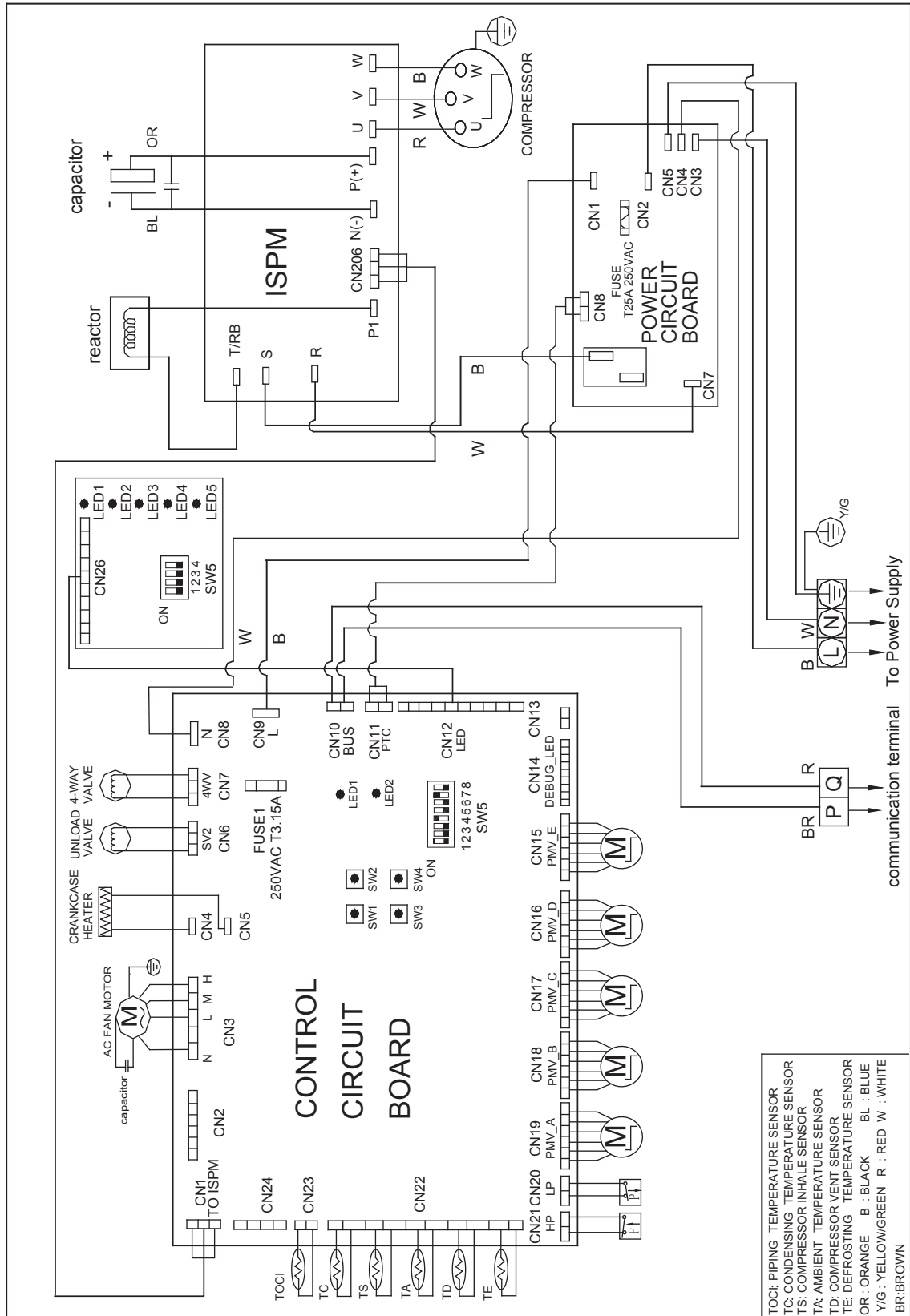
AU252XGERA:



AU282XHERA,AU342XHERA Wiring Diagram



AU362XHERA



5.1.3 Switch setting and functions:

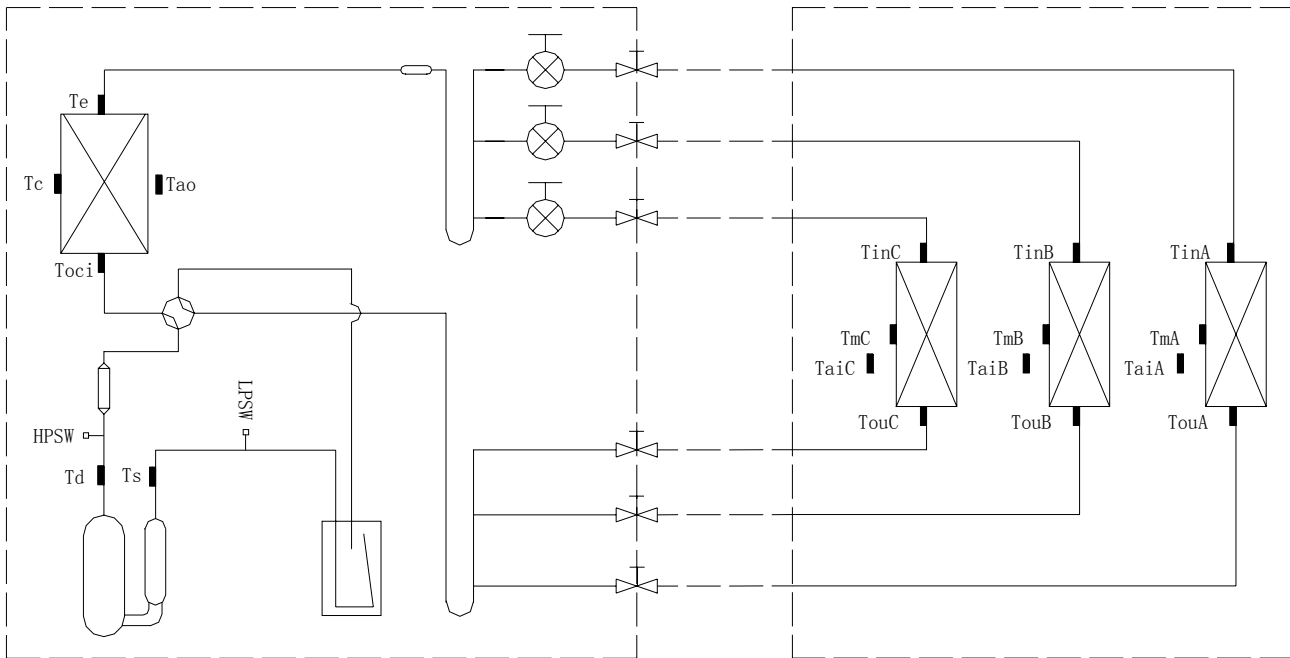
No	Item
A8	Set in factory
C1	Switch function: SW5-1---outdoor fan motor selection, ON: DC fan motor; OFF: AC fan motor
	Switch function: SW5-2---defrosting data setting, ON=6degree, OFF=8degree (set when out of factory). For the place where is easy to frost, it is 6 degree; for the place hard to frost, it is 8 degree.
C2	Switch function: SW5-3, SW5-4---piping length selection, the set data is M when out of factory. S (SW5-3=OFF SW4=ON) L (SW5-3=ON SW4=OFF) - (SW5-3=ON SW4=ON) M (SW5-3=OFF SW4=OFF)
C3	Switch function: SW5-5, SW5-6---outdoor horse power selection (for different outdoor, the current limitation is different too. The corresponding selection must be taken, or the module protection will occur.) 2HP (SW5-5=OFF SW5-6=ON) 2.5HP (SW5-5=ON SW5-6=OFF) 3HP (SW5-5=ON SW5-6=ON) 3.5HP (SW5-5=OFF SW5-6=OFF)
C4	Switch function: SW5-7, SW5-8: SW5-7—pre-set, set as OFF when out of factory. SW5-8—silent operation function, ON---available, OFF---not available (set when out of factory) When it is ON, the max. fan speed is Class-6, and the max. running frequency is 10Hz.
C8	Set in factory

2. Defination of 4-bit dip switch SW5 on failure indicator board:

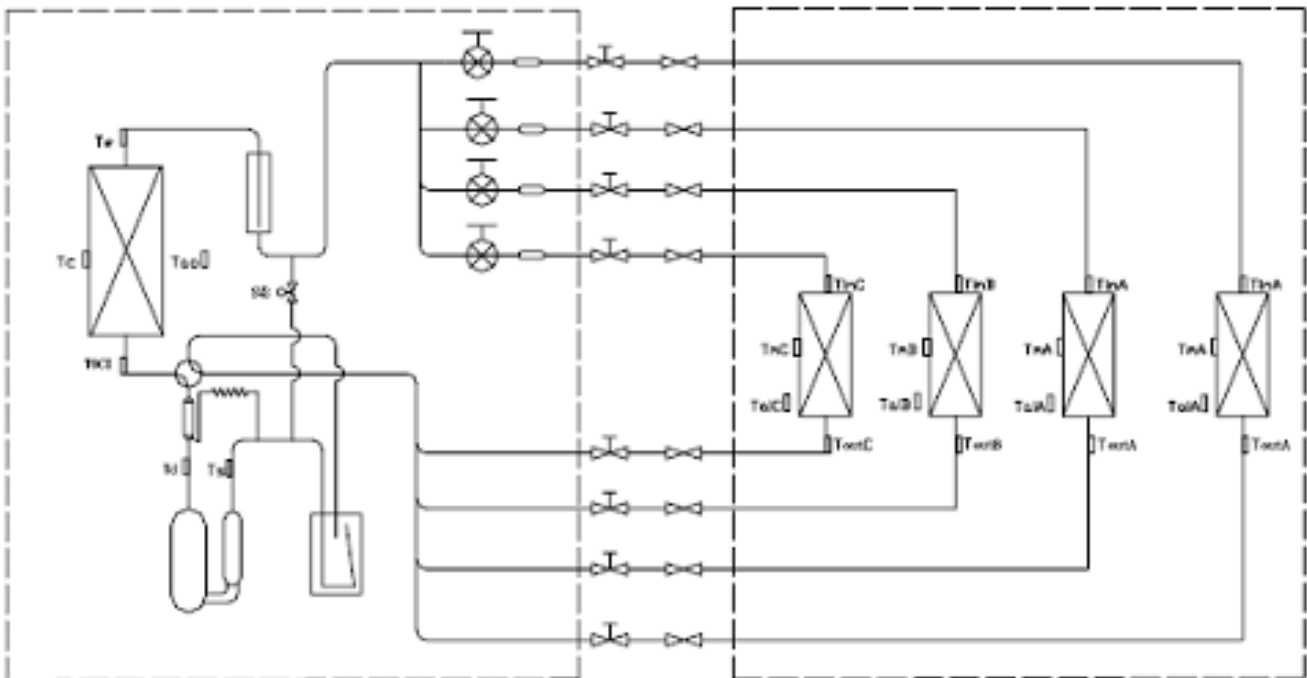
1	2	3	4	Defination
OFF	OFF	OFF	OFF	State when out of factory (normal state)
OFF	ON	OFF	OFF	Compulsory cooling: frequency 60HZ, outdoor fan motor Class-7, fixed open angle 300, the others are in normal state
ON	OFF	OFF	OFF	Compulsory heating: frequency 50HZ, outdoor fan motor Class-5, fixed open angle 300, the others are in normal state
OFF	OFF	ON	OFF	Rated operation: auto changeover for cool/heat, max. frequency 53HZ(E) in cooling, and max. frequency 72HZ(E) in heating, the frequency is set automatically in other states.

3. Main control functions

3.1 Refrigerant diagram



Pipe system for AU182XFERA and AU222XFERA



Pipe system for AU282XHERA

3.2 Outdoor frequency control

3.2.1 Compressor running frequency range: 20~90RPS

3.2.2 Definition of high-efficiency operation and its frequency control

In order to meet the cooling request at high ambient temperature and the heating request at low ambient temperature, we set the high-efficiency operation.

Entering condition: cooling mode, $T_{ao} \geq 33^{\circ}\text{C (E)}$, heating mode, $T_{ao} \leq 5^{\circ}\text{C (E)}$.

3.3 Electronic expansion valve (EEV) control

3.3.1 Electronic characteristic

Max. open angle	500 pulse
Driving speed	PPS

3.3.2 Initialization of EEV

EEV driving speed: open direction: 32MS; close direction: 32MS

3.3.3 Open angle limitation of EEV

	Unit stop	Adjustable upper limitation	Thermostat ON	Thermostat OFF	Adjustable lower limitation
Cool/dry	5 (E)	450 (E)	standard open angle+tolerance	5 (E)	80 (E)
heat	60 (E)	450 (E)	standard open angle+tolerance	60 (E)	80 (E)

3.3.4 Standard open angle control

In Cool/Dry mode, standard open angle: outdoor ambient temp. $\geq 20^{\circ}\text{C}$, 250 pulse(E);

Outdoor ambient temp. $< 20^{\circ}\text{C}$, 210 pulse(E);

In Heat mode, standard open angle: outdoor ambient temp. $\geq 10^{\circ}\text{C}$, pulse (E);

outdoor ambient temp. $< 10^{\circ}\text{C}$, 210 pulse (E).

3.3.5 When discharging temp. Td is too high, modify the EEV angle.

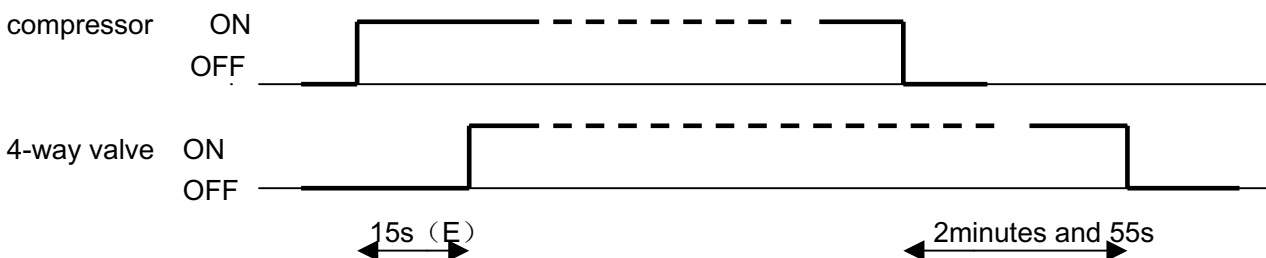
In order to cooperate the compressor discharging temp. over high protection, the system will enlarge the EEV open angle. Within 5 minutes after compressor starts up, it will not modify. The detecting period is 30 seconds.

Cooling mode	Indoor modification angle
$100^{\circ}\text{C} < \text{discharging temp.}$	+50degree/30seconds, it will stop until up to the max. permitted opening angle
$90^{\circ}\text{C} < \text{discharging temp.} \leq 100^{\circ}\text{C}$	Keep the angle
$\leq 90^{\circ}\text{C}$	-5degree/30seconds, and reduce to 0 degree gradually
Heating mode	Indoor modification angle
$100^{\circ}\text{C} < \text{discharging temp.}$	+50degree/30seconds, it will stop until up to the max. permitted opening angle
$90^{\circ}\text{C} < \text{discharging temp.} \leq 100^{\circ}\text{C}$	Keep the angle
$\leq 90^{\circ}\text{C}$	-5degree/30seconds, and reduce to 0 degree gradually

3.4 4-way valve control in heating

Protection when 4-way valve can not reverse in heating:

10 minutes later after compressor startup, if indoor coil average temp. is below 15degree and keeps for 1 minute, the unit will stop and occur the 4-way valve protection.

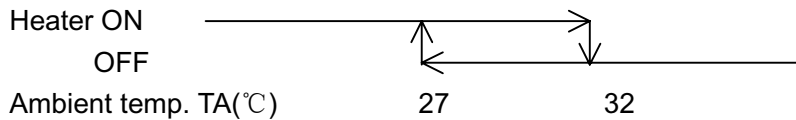


3.5 Electric heater control

If compressor has not run for a long time, the refrigerant will deposit on the bottom of compressor and mix with the refrigerant oil. When re-startup, because low pressure reduces, refrigerant will be segregated from the refrigerant oil and cause foam in the oil, which will make compressor exhaust a lot of oil. Therefore please stop heating the compressor bottom to ensure the low pressure in startup period should

not go down greatly.

- ✧ Ambient temp. $TA \leq 27^\circ\text{C}$, when compressor stops, the electric heater will be electrified.
- ✧ When $TA \geq 32^\circ\text{C}$, or compressor running, the electric heater will be off.



3.6 Control of liquid spray valve SV2:

According to the compressor discharging temp., open or close the SV2.

①Control condition:

- A. In every mode (including defrosting and oil return operation), the control can work.
- B. In 3 minutes after compressor startup, ignore the abnormal compressor suction and discharging value.
- ②3 minutes later after compressor startup, according to the discharging temp., the following procedure will be taken:

$T_d \leq 90^\circ\text{C}$, SV2 close;

$T_d > 110^\circ\text{C}$, SV2 open.

- ③In 150 seconds when compressor stops, in order to keep the system in balance, please open the liquid spray valve SV2. 150 seconds later after compressor stops, SV2 close.

3.7 Control of defrosting in heating

In heating mode, defrosting temp. sensor will check the frosting condition of outdoor heat exchanger and make defrosting control.

3.7.1 Enter condition:

- ①In heating mode, if the compressor has run for 10 minutes continuously and run for 45 minutes in all, the system will measure the defrosting temperature sensor T_e and outdoor ambient temp. sensor TA , if the below condition can be met for continuous 5 minutes, the unit will enter defrosting operation:

$$T_e \leq C \times TA - \alpha$$

Herein: C : $TA < 0^\circ\text{C}$, $C=0.8$ $TA \geq 0^\circ\text{C}$, $C=0.6$

According to SW2, the setting is as follow: in the place easy to frost, it is H; when out of factory, it is M.

Jumper selection	M(out of factory)	H
$\alpha (^\circ\text{C})$	8(E)	6(E)

- ②Defrosting entering condition: $-15^\circ\text{C} \leq C \times TA - \alpha \leq -2^\circ\text{C}$

- ③Stop and Pause condition of compressor running accumulative time in heating mode:

Checking Stop: running operation changes from heating to cooling.

Checking Pause: thermostat OFF, or the unit stops.

3.7.2 Cancel condition:

It will take the max. 10 minutes from beginning defrosting to quit it. T_e sensor will measure the condition of outdoor heat exchanger, if the temp. is over 7°C for 60 seconds in all or is up to 12°C for 30 seconds in all, the defrosting will be over.

3.7.3 Compulsory defrosting control

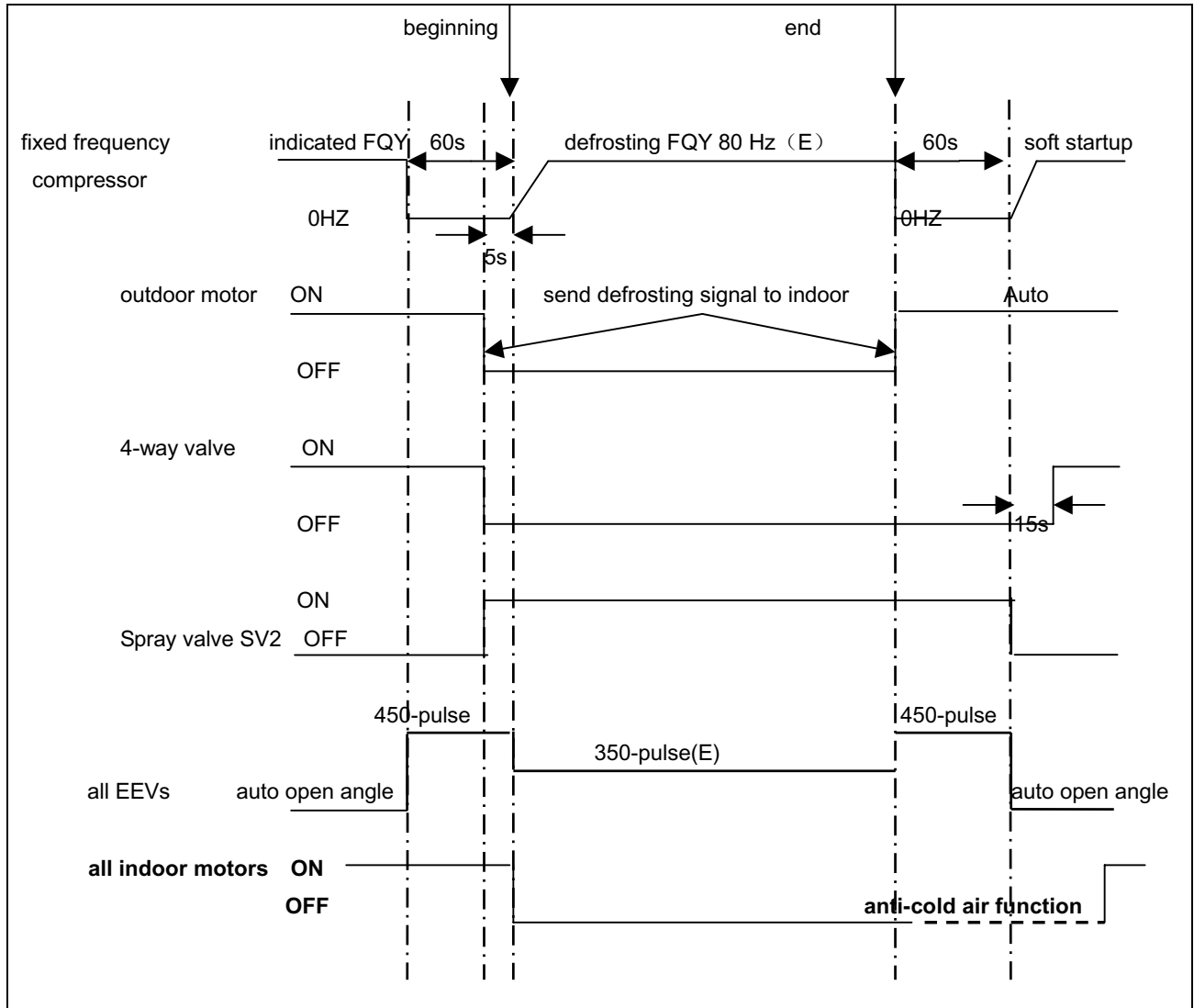
Enter condition: in heating mode, after receiving the compulsory defrosting signal from indoor unit, the unit will perform the compulsory defrosting operation.

Cancel condition: $T_e \geq 12^\circ\text{C}$ and keep for 1 minute or the defrosting time is over 10 minutes.

The manual defrosting signal of indoor unit will remain until the outdoor enters defrosting mode.

Note: When outdoor compressor not running, the unit still can enter manual defrosting, but it will comply with the 3-minute protection of compressor.

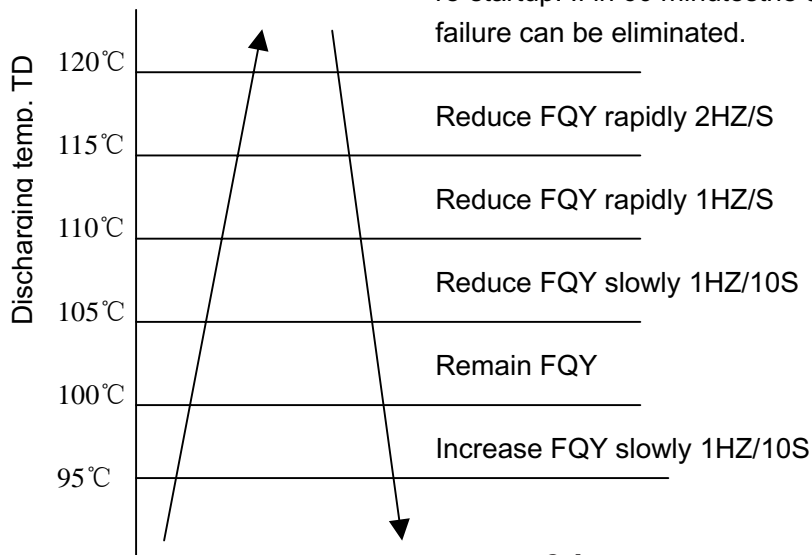
3.7.4 Defrosting operation flow chart



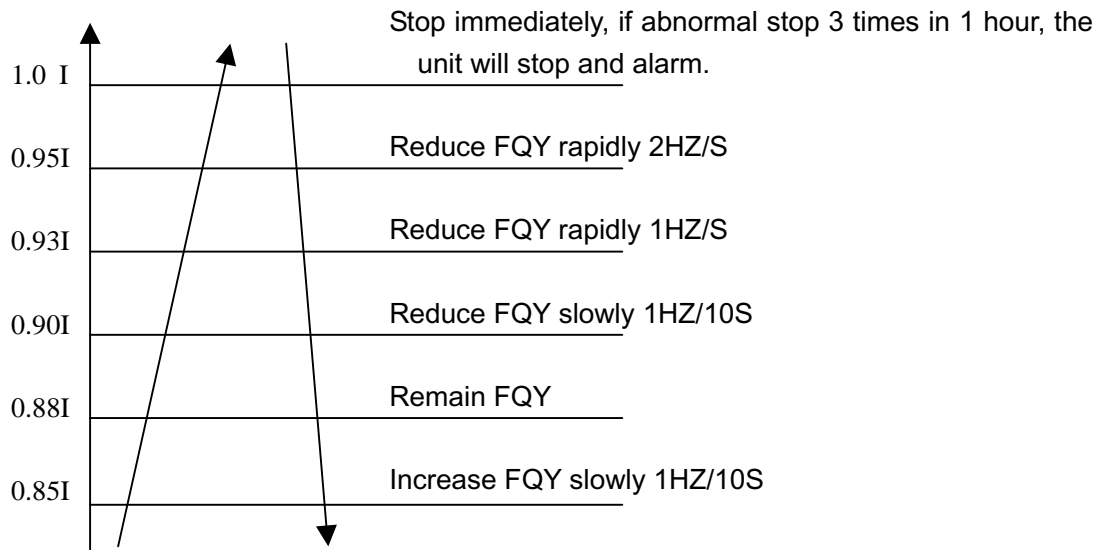
3.8 Frequency control when Td is too high

Purpose: make compressor frequency control if the discharging temp. is too high, to lower the discharging temp. efficiently and ensure the system can run normally.

If keeping for 10s, the unit stops, 3 minutes later, the unit can re-startup. If in 60 minutes the unit occurs alarm for 3 times, the failure can be eliminated.



3.9 Frequency control when there is CT over current protection



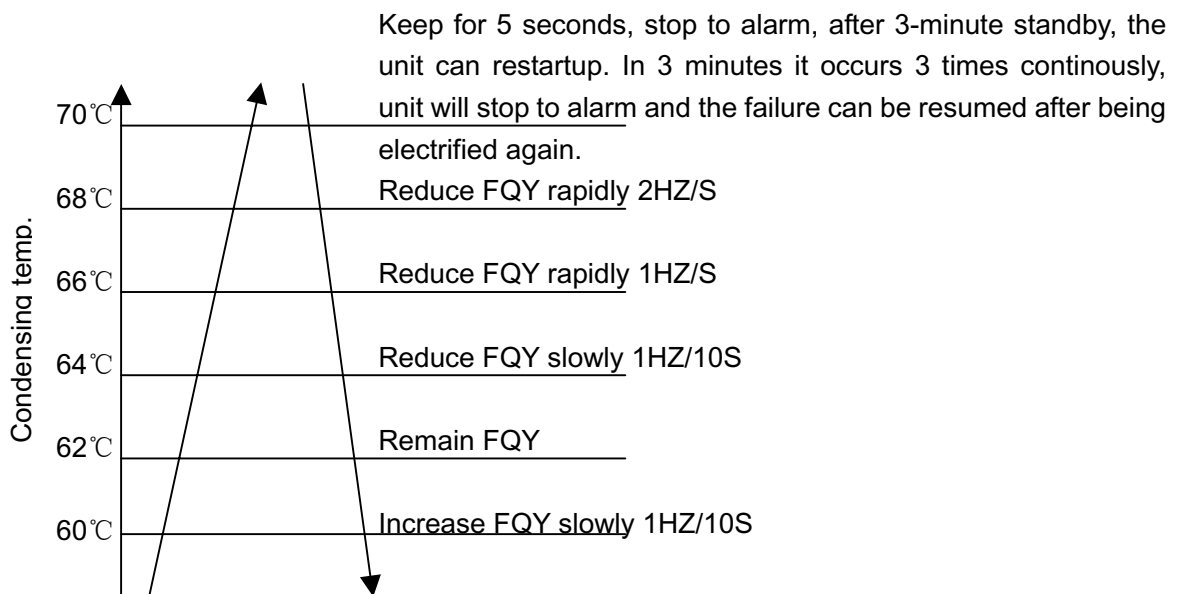
3.10 High pressure protection

When the input signal of pressure switch is high level:1, that shows there is no protection.

When the input signal of pressure switch is low level: 0 for 1 minute, that shows high pressure protection works. At this time, compressor stops, outdoor will send the alarm signal. The alarm can be resumable. If in 60 minutes, the failure occurs 3 times, the failure can be confirmed and send failure code to indoor.

Meanwhile, by controlling the max. condensate temp. Tc (cooling) or TmAVE (heating), please confirm as follow:

In nominal cooling/dry/heating mode, high pressure can be controlled by limiting the max. frequency.



3.11 Low pressure protection

(1) When compressor is running, if output signal of low pressure switch is low level: 0 for 1 minute continuously, compressor will stop, outdoor alarms. The alarm can be resumable. If in 60 minutes, the failure occurs 3 times, the failure can be confirmed and send failure code to indoor.

(2) When compressor no running, if output signal of low pressure switch is low level: 0 for 30 seconds continuously, alarm will occur.

- When unit stops, the reason that system still checks the low pressure : in a long time stop, make protection for the compressor on the condition of great refrigerant leakage.
- The reason that low pressure switch action time is 30 seconds: when compressor stops, low pressure does not change, so it will be shorter than the set time in operation.

(3) When compressor starts up, in 8 minutes, low pressure switch signal will be shielded.

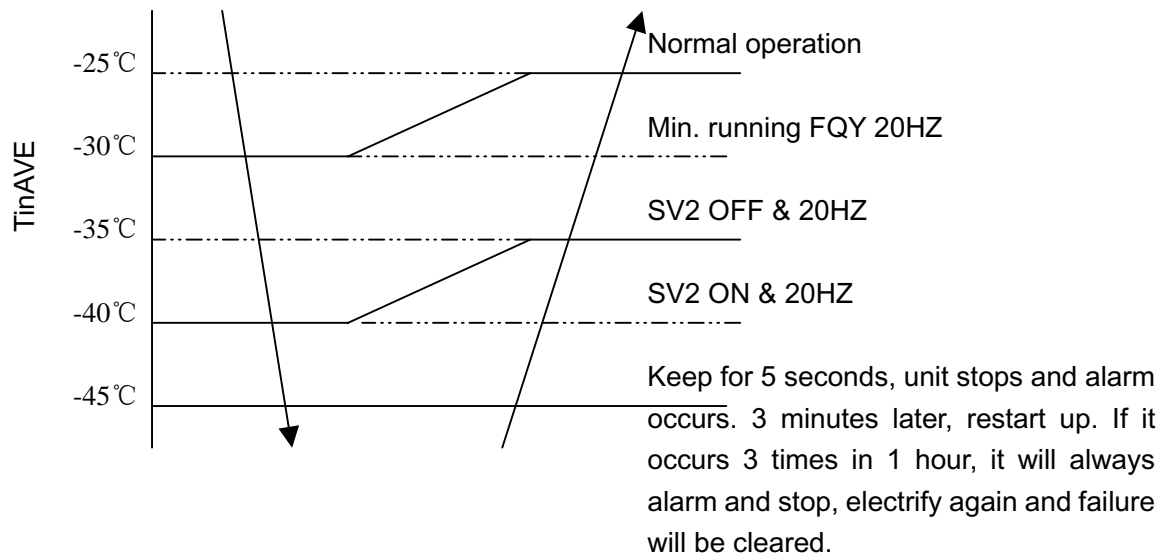
(4) In defrosting, low pressure switch will be shielded.

(5) In oil return procedure, low pressure switch will be shielded.

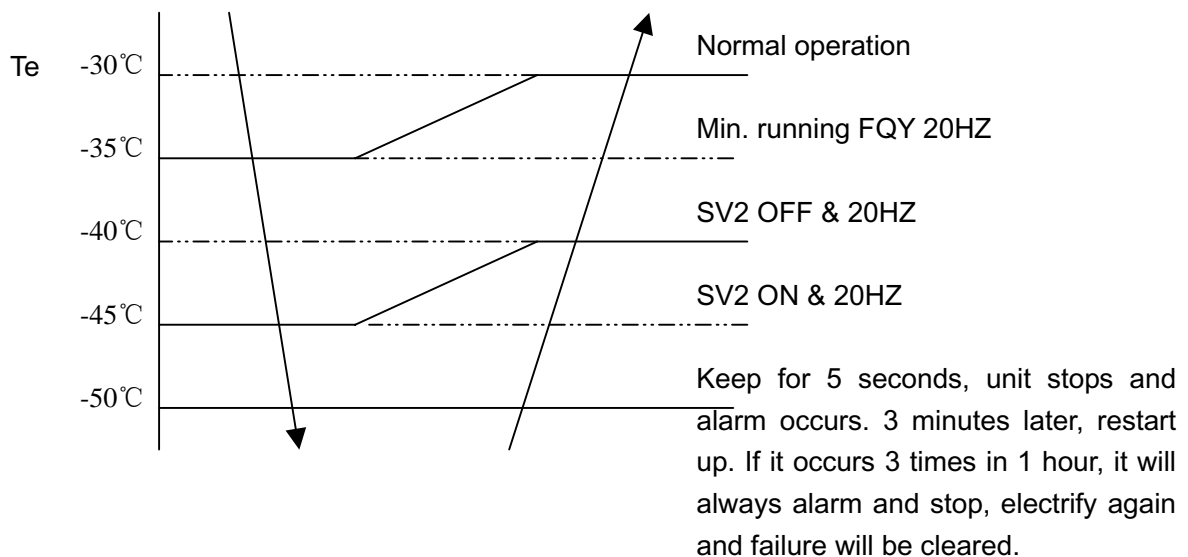
(6) In the refrigerant discharging procedure after the oil return in cooling is over, low pressure switch will be shielded.

In addition, the system will control low pressure through the evaporator temp. TE to realize the low pressure protection function.

In cooling, confirm through Tc2AVE:



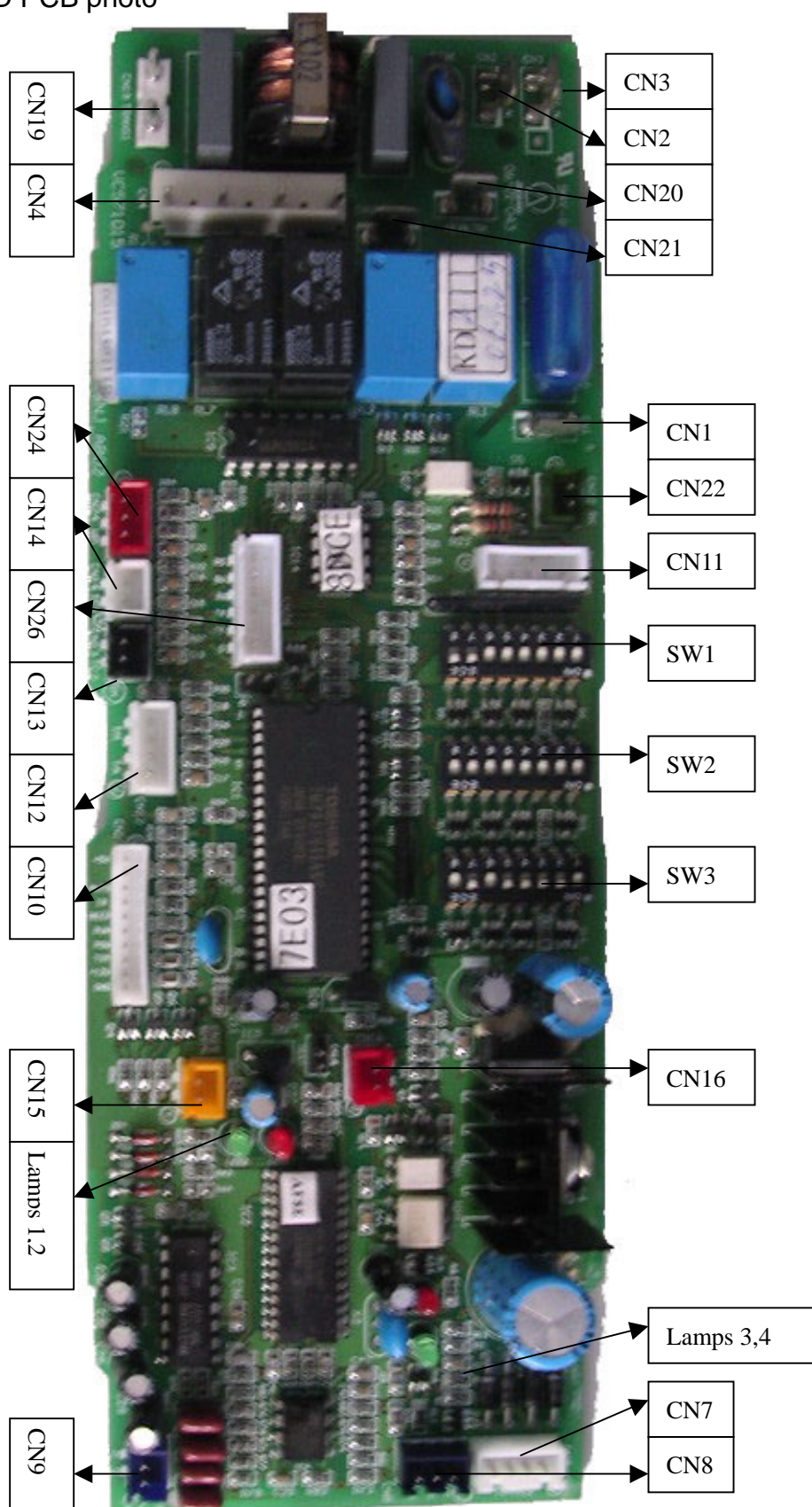
In heating, confirm through defrosting temp. Te:



If the failure is not confirmed as the permanent protection, outdoor will not send failure code to indoor, and indoor will not alarm.

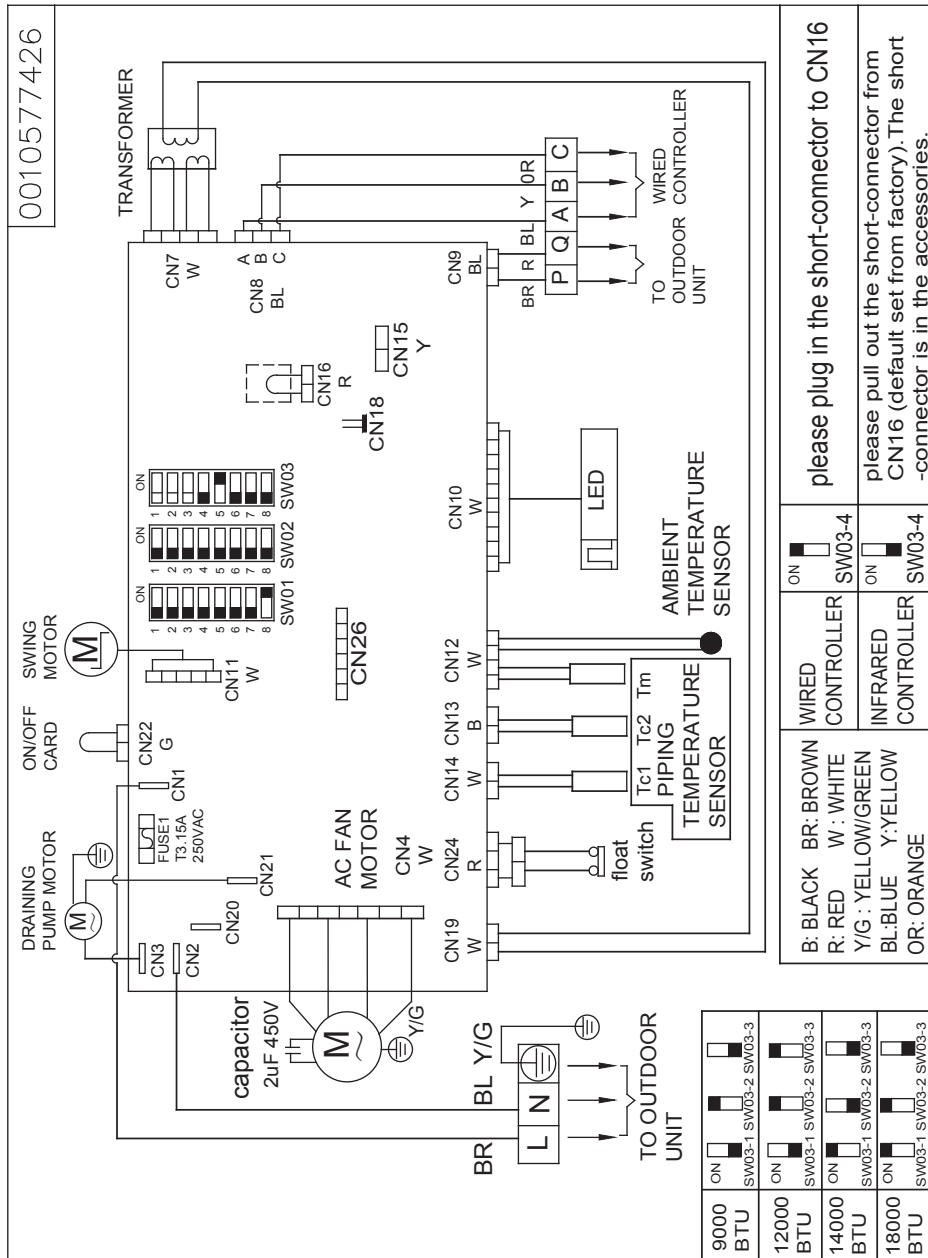
5.2 Indoor unit

5.2.1 AB,AD PCB photo

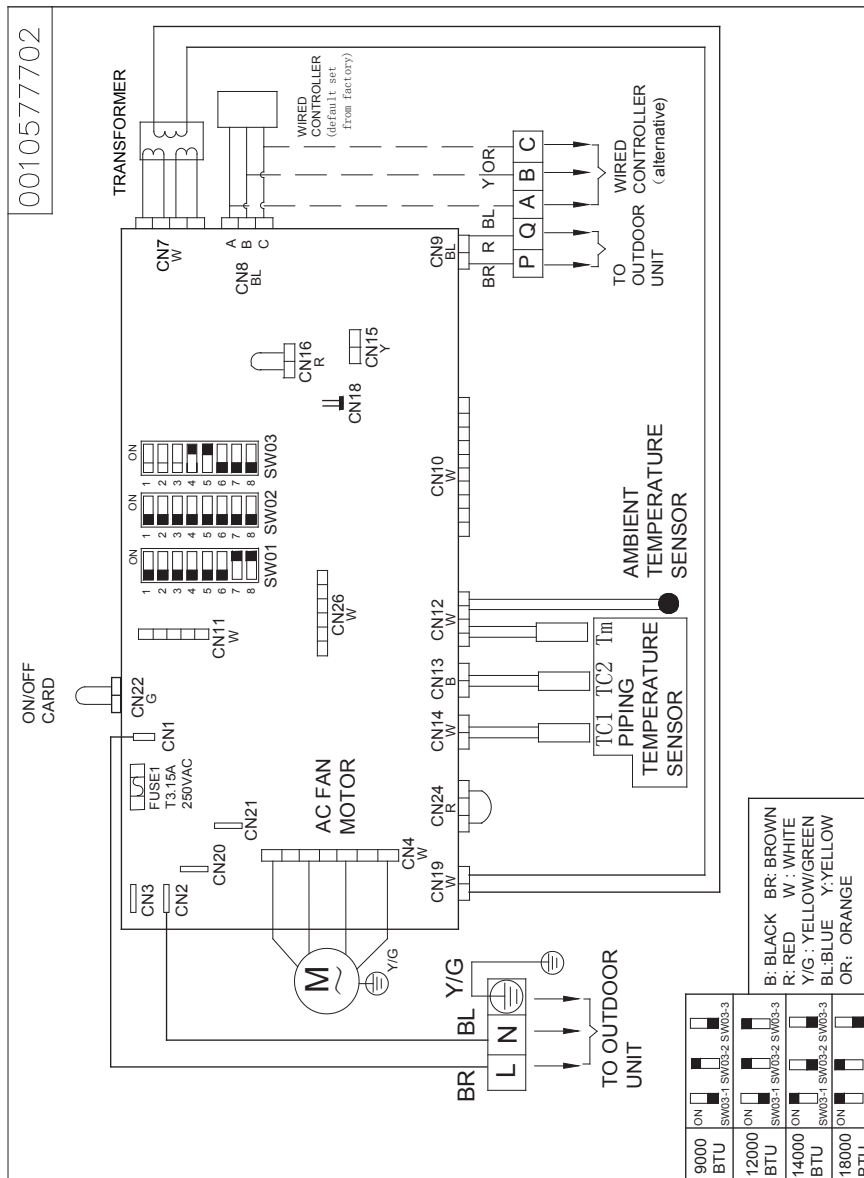


5.2.2. AB, AD Wiring Diagram

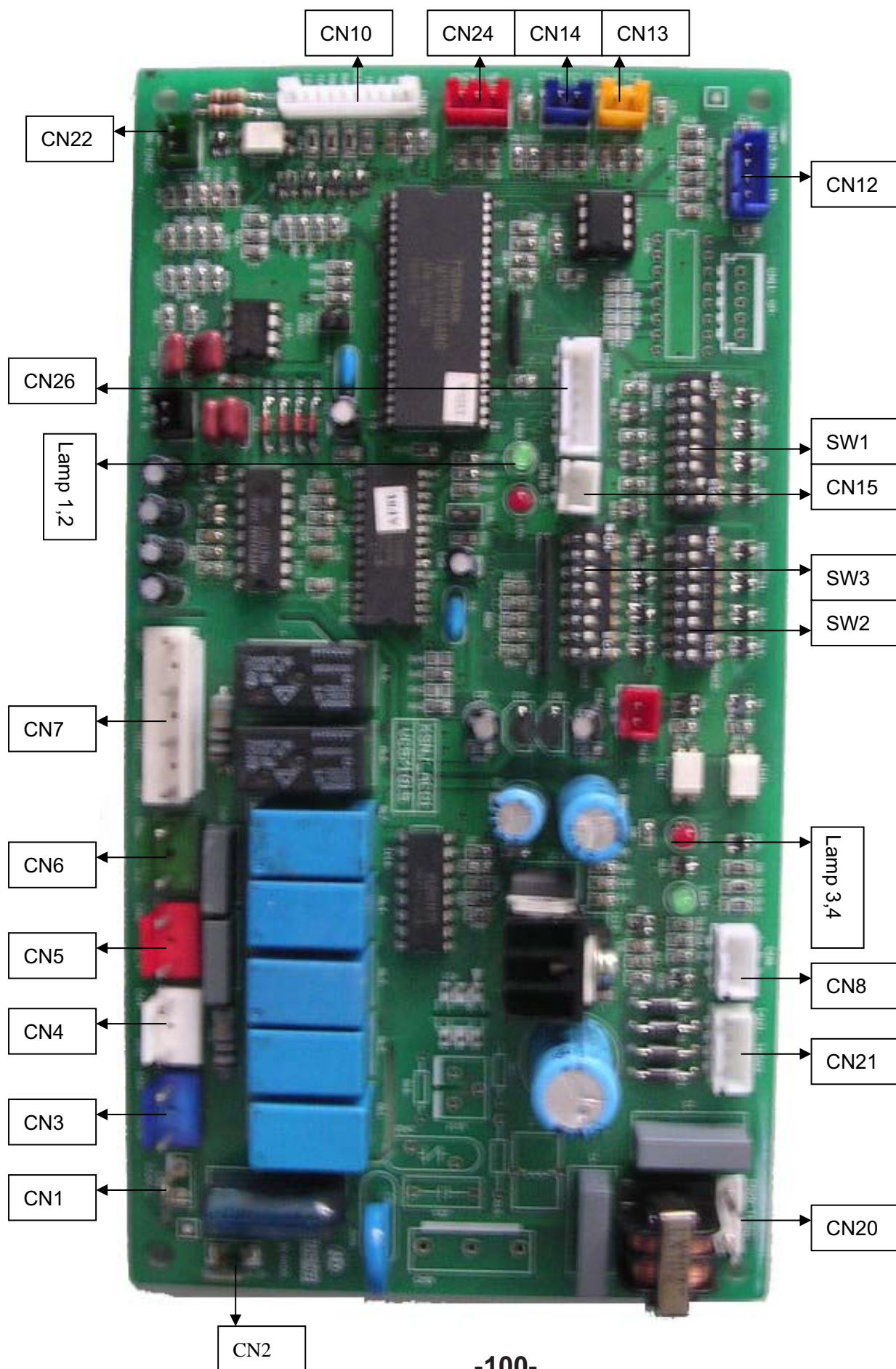
AB*XCERA:



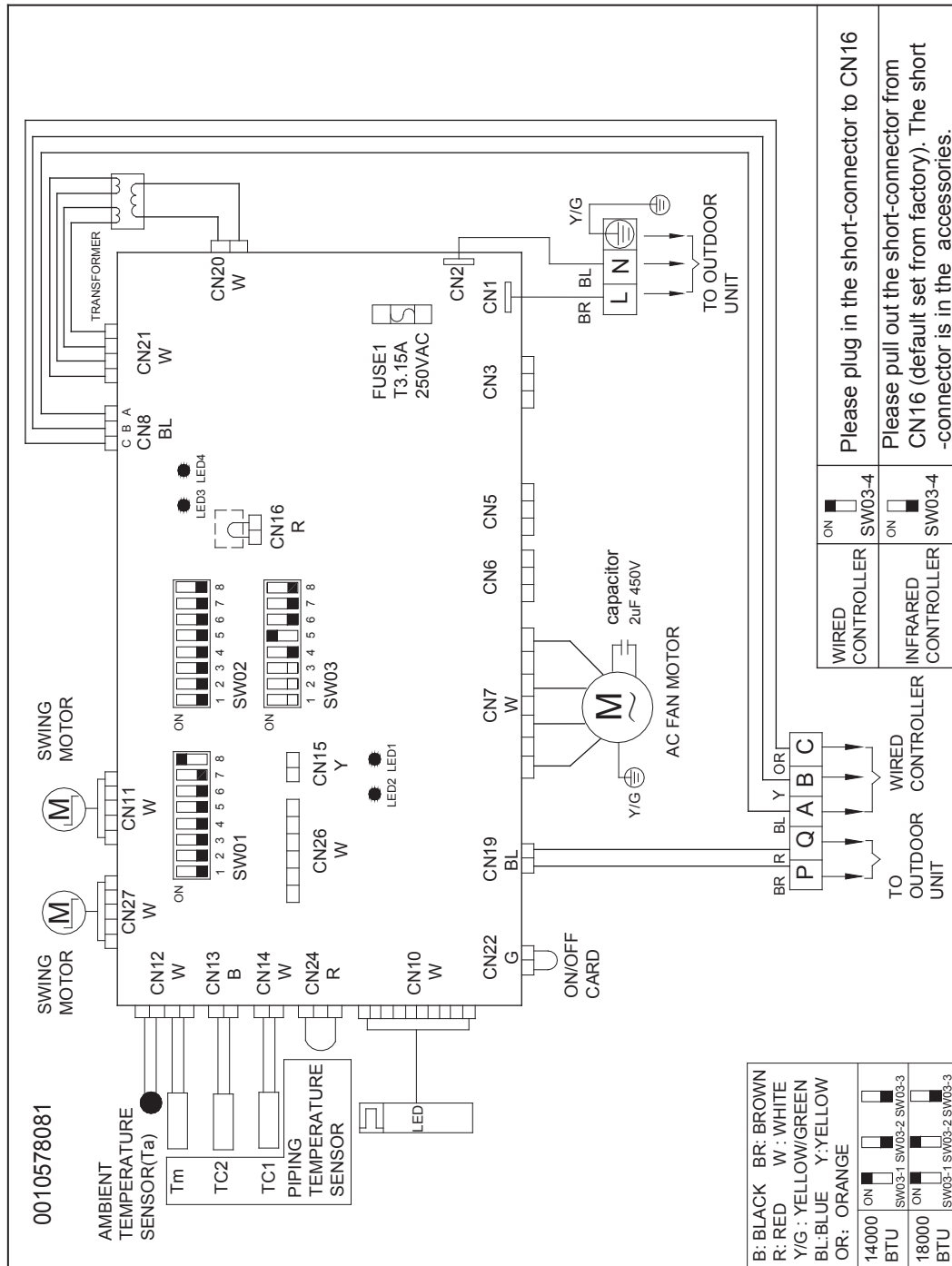
AD***XLERA



5.2.3. AC142-182XCERA PCB Photo



5.2.4. AC142-182XCERA Wiring Diagram



5.2.5. Electrical Control Functions For Cassette and Convertible type

1. Dip switch functions:

1.1 SW01 detailed definition is as following:

SW01								Function
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
				--	--	--	--	-
				--	--	--	--	--

				--	--	--	--	--
--	--	--	--	--	--	--	0	Passive contact valid
--	--	--	--	--	--	--	1	Passive contact invalid
--	--	--	--	--	--	0	--	To set indoor address(by remote/wired controller)
--	--	--	--	--	--	1	--	To set indoor address(by dip switch)
--	--	--	--	--	0	--	--	AC 3-speed motor
--	--	--	--	--	1	--	--	AC stepless motor
--	--	--	--	0	--	--	--	Pre-set
--	--	--	--	1	--	--	--	Pre-set

1.2 SW02 detailed definition is as following:

SW02								Function
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
--	0	0	0	0	0	0	0	Central control address=1
--	0	0	0	0	0	0	1	Central control address =2

--	1	1	1	1	1	1	1	Central control address =128
0								Allow to set central control address
1								Forbid to set central control address

1.3 SW03 detailed definition is as following:

SW03								Function
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
			--	--	--	--	--	
			--	--	--	--	--	
			--	--	--	--	--	
			--	--	--	--	--	
			--	--	--	--	--	
			--	--	--	--	--	
			--	--	--	--	--	
--	--	--	0	--	--	--	--	Remote control unit
--	--	--	1	--	--	--	--	Wired control unit
--	--	--	--	0	--	--	--	Display cooling only on wired controller(Dry, Cool, Fan)
--	--	--	--	1	--	--	--	Display heat pump on wired controller(Cool, Heat etc)

								DRY, COOL, FAN)
--	--	--	--	--	0	0	0	Indoor communication address 1
--	--	--	--	--	0	0	1	Indoor communication address 2
--	--	--	--	--	0	1	0	Indoor communication address 3
--	--	--	--	--	0	1	1	Indoor communication address 4
--	--	--	--	--	1	0	0	Indoor communication address 5
--	--	--	--	--	1	0	1	Indoor communication address 6
--	--	--	--	--	1	1	0	Indoor communication address 7
--	--	--	--	--	1	1	1	Indoor communication address 8

Note: "1": dip switch at ON, "0": dip switch at OFF.

2. Sign definition:

Indoor				outdoor					
Tai	Tc1	Tc2	Tm	Tao	Toci	Tc	Te	Ts	Td
Ambient temp.	Outlet pipe temp.	Inlet pipe temp.	mid coil temp.	Ambient temp.	Thick pipe of heat exchanger	mid condenser temp.	Defrost temp.	Compressor suction temp.	Compressor discharging temp.
Tcomp1,2			Tset						
Temp. compensation			Set temp.						

3. Dry operation

$T_{ai} < 16^{\circ}\text{C}$, indoor unit stops running and sends stop-unit signal to outdoor.

$T_{ai} \leq T_{set}$, indoor motor runs at low speed and sends stop-unit signal to outdoor.

4. Fan operation

Indoor fan motor will run as the fan speed set on the remote controller or the wired controller and indoor unit will send the stop-unit signal to outdoor.

5. Auto operation

5.1 If the unit enters Auto mode for the first time, the system will adjust the operation mode according to the room temp. and the set temp.

When $T_{ai} \geq T_{set}$, entering auto cooling mode;

When $T_{ai} < T_{set}$, entering auto heating mode.

5.2 Auto cooling mode is as the same as the cooling mode. After the thermostat is OFF for 15 minutes, if $T_{ai} + 1 + T_{comp2} < T_{set}$, the unit will enter auto heating mode, or the unit will still stay at auto cooling mode and stop when it reaches the set temperature; while the indoor motor will be at low speed.

5.3 Auto heating mode is as the same as the heating mode. After the thermostat is OFF for 15 minutes, if $T_{ai} \geq T_{set} + 1 + T_{comp1}$, the unit will enter auto cooling mode, or the unit will still stay at auto heating mode;

5.4 In this mode, the Sleep function is available, run as cooling sleep in cooling mode and as heating sleep in heating mode. Once sleep mode is set, the mode will not change after the unit stops for 15 minutes when it arrives T_{set} .

5.5 Mode conversion will be confirmed after compressor has stopped for 10 minutes.

6. Abnormal operation

6.1 When outdoor modes from the request of indoor unit conflict, the one entering firstly will take priority.

6.2 After indoor receives the ON command from wired controller, it will firstly confirm the outdoor current operation mode. If they are the same modes, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode and send the “standby” signal to wired controller until outdoor stops or outdoor mode the requested mode of wired controller are the same, the unit will run as the requested mode of wired controller.

6.3 After indoor receives the ON command from remote controller, it will firstly confirm the outdoor current operation mode. If they are the same mode, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode. After setting on remote controller, if the buzzer sounds two times, that shows abnormal operation. Indoor will run until the outdoor mode and the requested mode of remote controller are the same.

6.4 In AUTO mode, when the indoor unit occurs abnormal operation, the indoor unit will keep OFF state, and the buzzer will not sound until the outdoor mode and the requested mode of indoor unit are the same.

6.5 COOL (included AUTO COOL), DRY, FAN are not abnormal mode.

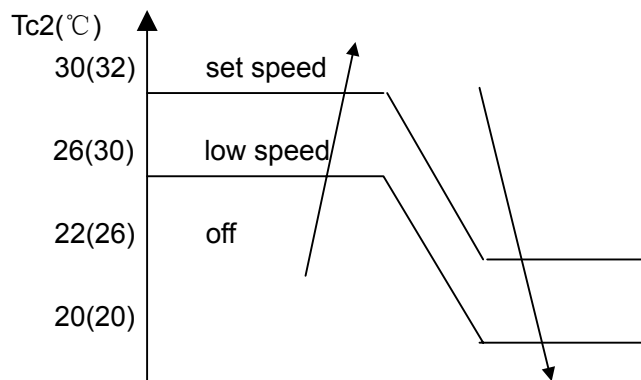
6.6 HEAT and FAN are not abnormal mode.

7. Control for discontinuous operation

After the unit starts up in cooling/heating mode, in 5 minutes, the compressor run/stop will not be controlled by the room temp., but after changing the set temp., if compressor stop condition can be met, the system will stop compressor immediately.

8. Anti-cold air control

In heating mode, after compressor startup, the system will control indoor fan motor according to indoor coil temperature. Detailed operation is as below:



Note:

- 1) The data in the parentheses is the control point when $T_{ao} > 10^{\circ}\text{C}$;
- 2) Indoor unit will send “pre-heat” signal to wired controller in anti-cold air period.

9. Fan motor control in defrosting

9.1 On receiving outdoor defrosting signal, indoor unit will stop after blowing remaining heat at slow speed for 20 seconds.

9.2 In defrosting period, indoor fan motor stops running.

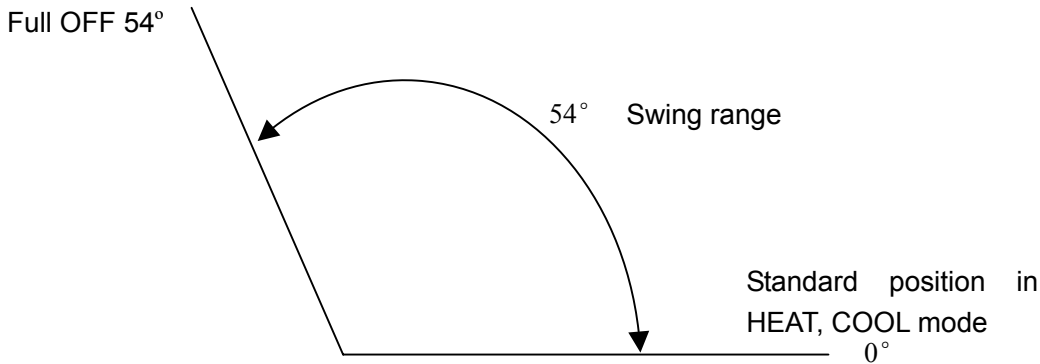
9.3 Defrosting is over, and indoor motor will run as anti-cold air state.

10. Blowing remaining heat operation

When the unit shuts off in heating mode or the thermostat is OFF, indoor motor will stop running after running at low speed for 30 seconds.

11. Swing motor control

Indoor unit will control the swing motor according to the swing signal from the wired controller.



12. Water pump control

12.1 Water pump will be electrified when indoor unit enters non-heating mode until indoor unit stops. 5 minutes later after indoor unit stops, water pump will stop.

12.2 When indoor unit is in heating mode, water pump will not operate.

12.3 In OFF state and in any mode, once float switch signal is measured, indoor unit will send OFF signal to outdoor and send the failure code of drainage system to the wired controller, then the water pump will work until the float switch signal is cancelled. After water pump is forced to run for 5 minutes, indoor unit will be back to normal state.

13. Compulsory defrosting operation

13.1 After indoor receives the compulsory defrosting signal, it will send continuously the signal to outdoor for 10 times, in this period, indoor unit will work normally and it will enter defrosting operation until it receives the enter-defrost signal from outdoor unit.

13.2 Wired control type: In heating mode, make a jumper for D2 to enter compulsory defrosting.

13.3 Remote control type: In heating mode, high speed, 30°C, press SLEEP button 6 times, and the buzzer will sound 3 times, then enter the manual defrosting.

14. Trial operation

14.1 Enter condition

- A. Wired control type: In OFF state of COOL or HEAT mode, press ON/OFF button for over 5 seconds to enter the cooling or heating trial operation;
- B. Remote control type: In OFF state, keep pressing ON/OFF button until 5 seconds later, the buzzer sounds twice, then enter the cooling or heating trial operation;

14.2 Response in trial operation

- A. Cooling trial operation: indoor sends S-CODE=SD to outdoor, indoor: at high speed, set temp: 16°C;
- B. Heating trial operation: indoor sends S-CODE=SF to outdoor, indoor: at high speed, set temp: 30°C;
- C. In this period, anti-freezed and overheat functions are invalid.

14.3 Quit condition

- A. Receiving the signal of cancelling trial operation from wired controller or remote controller;
- B. After trial operation has run for 20 minutes, it will quit trial operation automatically and enter the normal mode with the set temp.: 24°C.

15. Timer operation

15.1 Wired control type: wired controller will control the unit ON/OFF;

15.2 Remote control type: indoor unit will confirm the unit ON or OFF according to the current clock and the timer clock set by remote controller. When setting timer function, the timer LED will be ON.

16. SLEEP function

16.1 Wired control type unit is without sleep function;

16.2 Remote control type unit consists of cooling sleep and heating sleep, after the sleep is set, the unit

will change mode; the sleep will begin to count.

- A. In cooling/dry mode, after running for 1 hour, the set temp. will increase 1°C, another 1 hour later, the set temp. will increase 1°C again, then 6 hours (or set time-2) later, it will stop.
- B. In heating mode, after running for 1 hour, the set temp. will reduce 2°C, another 1 hour later, the set temp. will reduce 2°C again, then 3 hours later, the set temp. will increase 1°C, and another 3 hours(or set time-5), it will stop.
- C. When setting sleep function, indoor motor is forced at low speed.

17. Healthy negative ion function

When receiving the healthy signal from the wired controller or remote controller, if fan motor is running, the negative ion will work;

If the fan motor stops, the negative ion generator will stop.

18. Auto-restart function

18.1 Wired control type: jumper J07 at high level, auto-restart is available, if at low level, auto-restart is cancelled; when out of factory, the unit is with auto-restart function.

18.2 Remote control type: In 5 seconds, press SLEEP button(press SWING if without SLEEP button) 10 times continuously, the buzzer will sound 4 times and enter auto-restart function. In 5 seconds, press SLEEP 10 times continuously, the buzzer will sound twice and quit auto-restart function.

18.3 Memory information: ON/OFF state, mode, fan speed, set temp., health, swing position;

18.4 If the memory includes timer or sleep function, when being electrified again, timer and sleep will be cancelled;

18.5 If the memory includes auto mode, when the jumper shows cooling only type, auto mode will change to cooling mode.

19. Passive contact function

The unit adopts passive contact (220VAC input), which only make ON/OFF control. When it is close, the unit is ON; when it is open, the unit is OFF, and the other parameters will be as default or the data in memory.

19.1 Passive contact valid

The central control, remote control/wired control and the passive contact are “AND” relationship. The unit must be switched on by remote controller or wired controller; meanwhile the passive contact is close, indoor unit is ON and runs at the set state by the central controller, remote controller or wired controller;

19.2 Passive contact invalid

The central control, remote control/wired control and the passive contact are “OR” relationship. As long as the unit is switched on by remote controller or wired controller; meanwhile the passive contact is close, indoor unit is ON and runs at the set state by the central controller, remote controller or wired controller; when being electrified for the first time, and there is no auto-restart function, the passive contact is close, the unit will run in the following condition: cooling mode, auto fan speed, set temp. 24°C.

20. Setting indoor unit number

A. Wired control unit

At first, check the current indoor address:

In normal state, press SET button on wired controller for 5 seconds, the temp. setting area in LCD will display [XX], XX is indoor unit number, and you can select the number by temp. increasing/reducing button. And the timer setting area in LCD will display [YZZZ], Y is the digit type, ZZZ is the corresponding data. You can select the data by temp. increasing/reducing button.

Y	ZZZ	Digit type
A	Temp. of indoor sensor Tai	Actual data, decimal
b	Temp. of indoor sensor Tc1	Actual data, decimal
C	Temp. of indoor sensor Tc2	Actual data, decimal
d	Opening angle/2 of indoor EEV	Actual data, decimal
E	Indoor address	Actual data, hex
F	Indoor central address	Actual data, hex

B. Remote control type:

1) Enter method

In OFF state, press emergency switch until 15 seconds later, the buzzer sounds 4 times, indoor will enter the indoor unit number setting state.

2) Setting method

Press ON/OFF button (from OFF mode to ON mode), the times of SLEEP button to be pressed is the set unit number, then press ON/OFF button to quit unit number setting state, at this time, indoor unit is at OFF state, the display panel will display this unit number. For example, press SLEEP button once, it is No. 1 unit; press twice, it is No. 2 unit, and so on.

3) Quit method

In OFF state, press emergency switch until 15 seconds later, the buzzer sounds 5 times, the display panel will display this unit number and you can check if there are repeated numbers.

21. Setting method of temperature compensation Tcomp

A. Wired control type unit: this function is not available

B. Remote control type unit:

In cooling or heating mode, there is always with the temp. compensation.

In heating mode: In 24°C heating mode, press SLEEP(or SWING) button 7 times continuously within 5 seconds, indoor buzzer sounds twice, that shows temp. compensation works. Switch on the unit in heating mode by the remote controller, press TEMP button to set the set temp., so temperature compensation=the current set temp. - 24°C. For example, if the set temp. is 24°C, the temp. compensation is 0°C; if the set temp. is 25°C, the temp. compensation is 1°C. The max. compensation temp. is 6°C (the set temp. is 30°C). If you want to cancel it, set the temp. as 24°C.

In cooling mode: In 24°C cooling mode, press SLEEP(or SWING) button 7 times continuously within 5 seconds, indoor buzzer sounds twice, that shows temp. compensation works. Switch on the unit in heating mode by the remote controller, press TEMP button to set the set temp., so temperature compensation=24°C-the current set temp. . For example, if the set temp. is 24°C, the temp. compensation is 0°C; if the set temp. is 23°C, the temp. compensation is -1°C. The max. compensation temp. is -8°C (the set temp. is 16°C). If you want to cancel it, set the temp. as 24°C.

So the temp. compensation range is +8°C~-6°C.

22. Anti-freezed protection

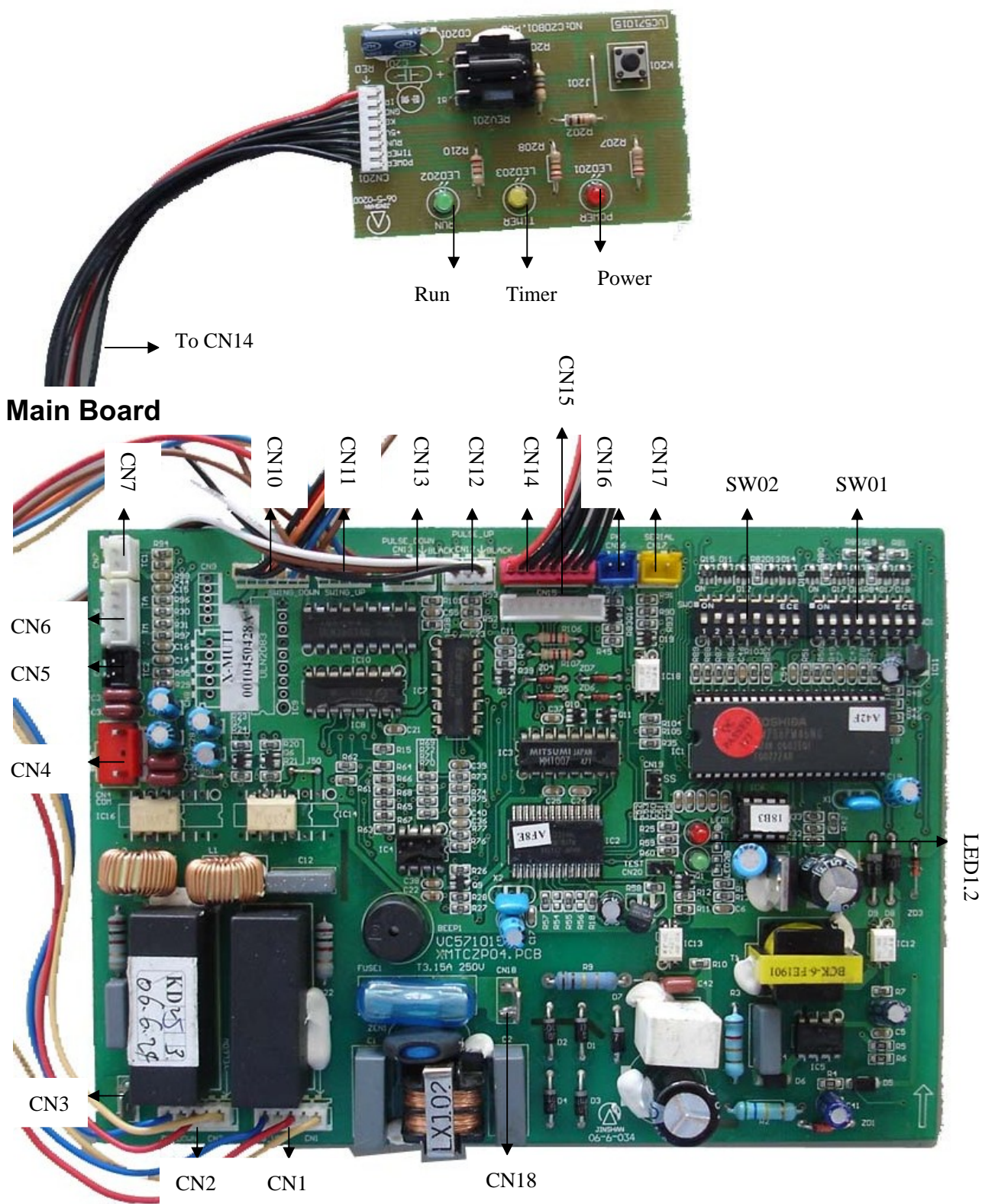
When compressor has run for over 5 minutes, to prevent indoor evaporator freezing (in cooling/dry mode), if indoor mid-coil temp. is below -1 degree for over 5 minutes, indoor EEV will close, and compressor will stop. When indoor mid-coil temp. is over about 10 degree, the unit will be normal.

23. Overload protection in heating mode

It is valid only in heating mode, if indoor mid-coil temp. is over about 65 degree continuously for 10 seconds, indoor will stop; while when indoor mid-coil temp. is below 52 degree for 3 seconds, indoor will resume.

5.2.6. AF092-122XCERA

Remote controller receiver



0010578106



5.2.8. Dip switch functions:

0---OFF 1---ON

SW01								Function description
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
-	0	0	0	0	0	0	0	Default position:0000000
-	0	0	0	0	0	0	0	Default position:0000000
.....								Default position:0000000
-	0	0	0	0	0	0	0	Default position:0000000
-	0	0	0	0	0	0	0	Default position:0000000
0	--	--	--	--	--	--	--	Set indoor address by remote controller
1	--	--	--	--	--	--	--	Set indoor address by dip switches

SW02								Function description
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
-	-	--	--	--	-	-	-	See wiring drawing
-	-	--	--	--	-	-	-	See wiring drawing
-	-	--	--	--	-	-	-	See wiring drawing
-	-	-	-	-	-	-	-	See wiring drawing
-	-	-	-	-	-	-	-	See wiring drawing
-	-	-	0	-	-	-	-	Default position:0
-	-	-	-	0	-	-	-	Room card function: ON
-	-	-	-	1	-	-	-	Room card function: OFF (Default position)
--	--	--	--	--	0	0	0	Indoor address1 (Default position)
--	--	--	--	--	0	0	1	Indoor address 2
--	--	--	--	--	0	1	0	Indoor address 3
--	--	--	--	--	0	1	1	Indoor address 4
--	--	--	--	--	1	0	0	Indoor address 5
--	--	--	--	--	1	0	1	Indoor address 6
--	--	--	--	--	1	1	0	Indoor address 7
--	--	--	--	--	1	1	1	Indoor address 8

Electrical PCB Functions:

1. For Console type, except fan motor control function, the others are same with Cassette Type PCB functions.

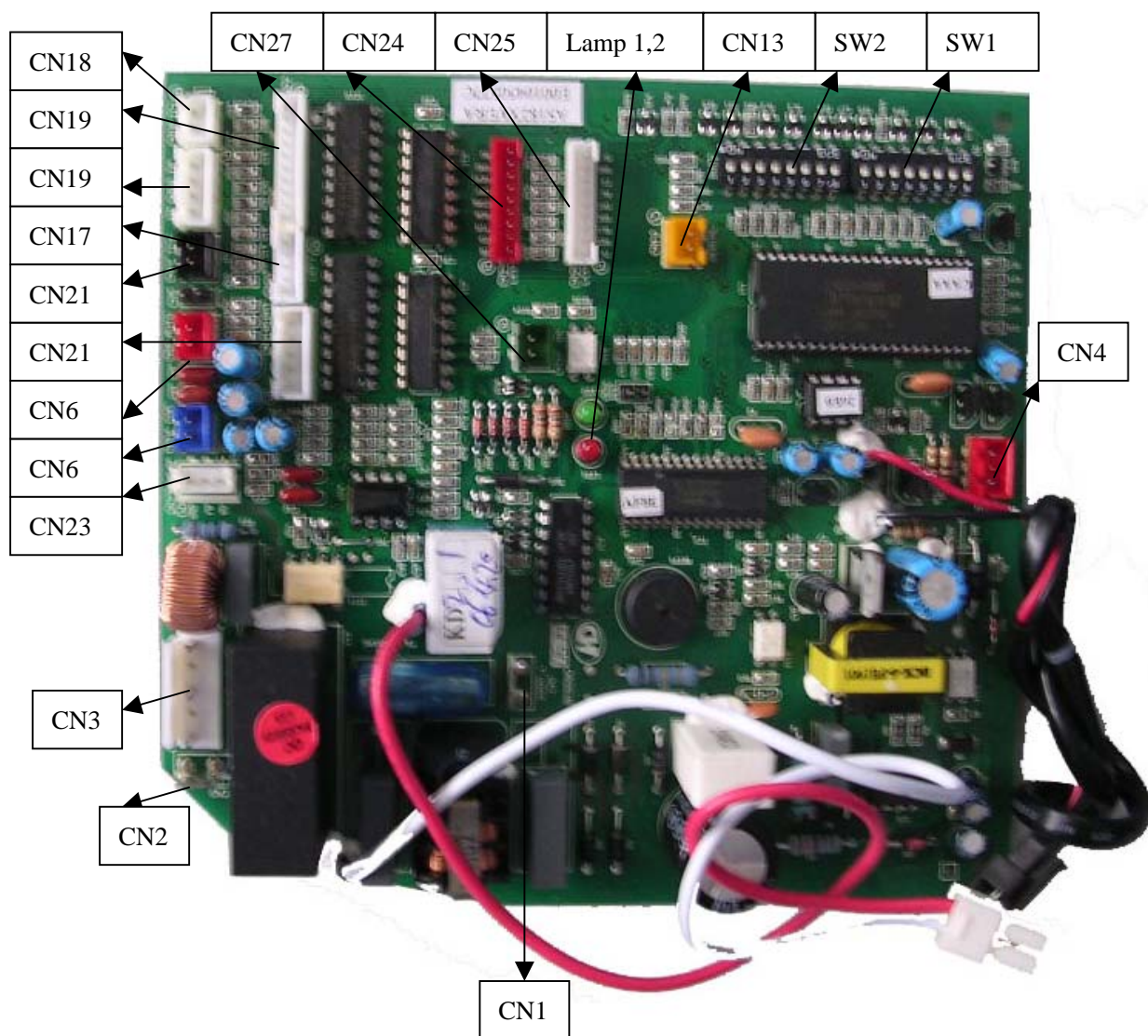
2. Fan motor choice function:

Compressor state: OFF

Press sleep button 6 timer quickly, PCB sound 1 time, it means , indoor fan motor works in single motor running mode

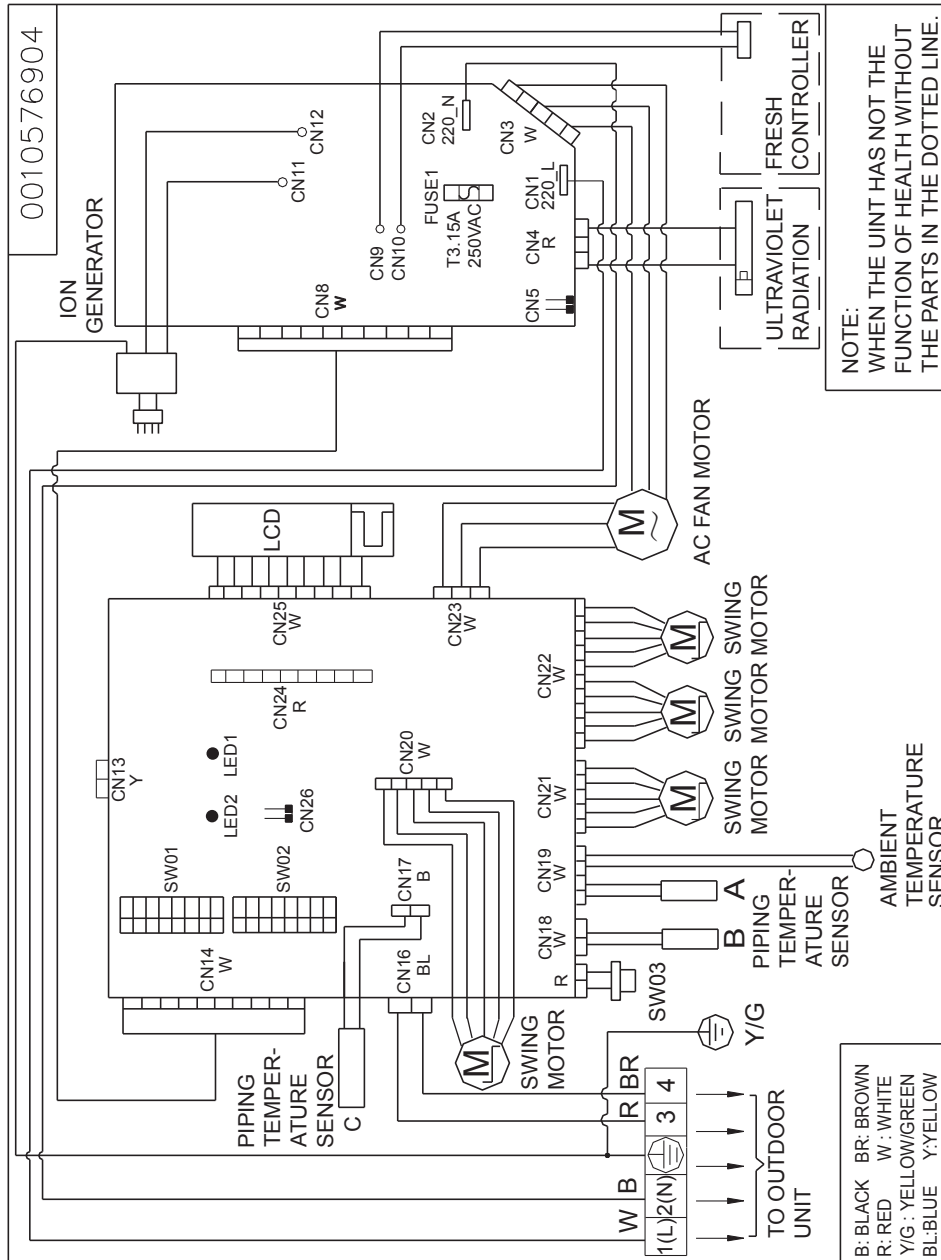
Press sleep button 6 timer quickly again, PCB sound 2 time, it means , indoor fan motor works in twin motor running mode

5.2.9. AS***XVERA PCB Photo

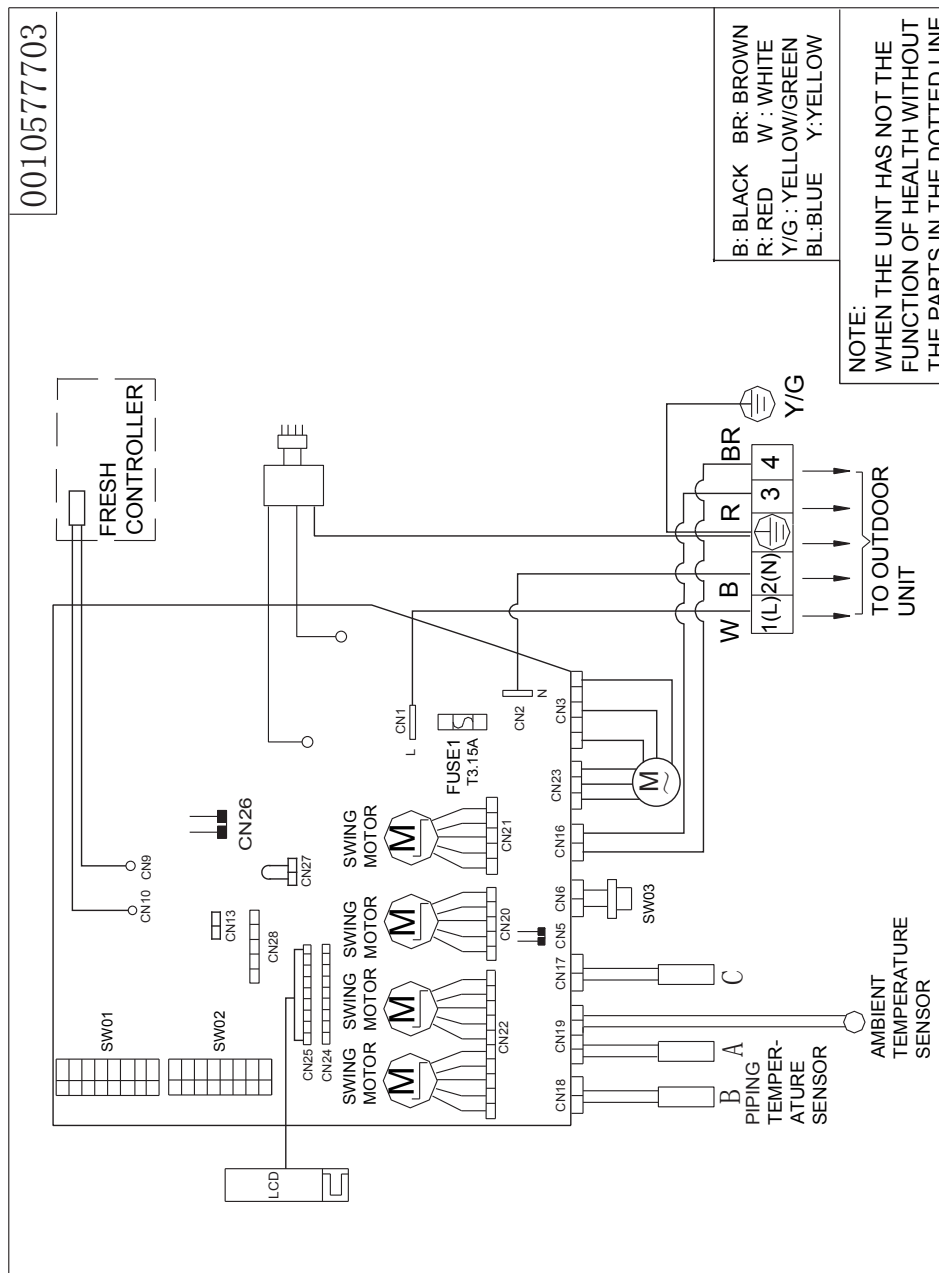


5.2.10. AS***XVERA Wiring Diagram

AS07/09/122XVERA:



AS182XVERA:



5.2.11. Wall Mounted types functions Description

Indoor electric control functions:

Note: The following functions are applicable for the unit in normal state.

1. Parameter input:

1.1 Analog data input:

1.1.1 Indoor temperature sensor input (TA): 1-way, 23K Ω at 25°C

1.1.2 Indoor coil outlet temp/inlet temp (TC1: gas pipe, TC2: liquid pipe): 2-way, 10K Ω at 25°C

1.1.3 Indoor middle coil temp. (Tm): 1-way, 10K Ω at 25°C.

1.2 Functional switch setting:

1.2.1 Central control address setting and indoor communication address setting:

8-way (SW01), the detailed definition is as follow: 0-OFF, 1-ON

SW01								Function
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
-	0	0	0	0	0	0	0	Set in factory
-	0	0	0	0	0	0	0	Set in factory
-	0	0	0	0	0	0	0	Set in factory
-	0	0	0	0	0	0	0	Set in factory
-	0	0	0	0	0	0	0	Set in factory
0	--	--	--	--	--	--	--	Indoor communication address set by remote controller—set in factory
1	--	--	--	--	--	--	--	Indoor communication address set by dip switch —set in factory

1.2.2 Indoor unit number setting and function setting: 8-way (SW02), the detailed definition is as follow:

SW02								Function
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
-	-	0	0	0	-	-	-	Set in factory
--	--	--	--	--	0	0	0	Indoor communication address 1- Set in factory
--	--	--	--	--	0	0	1	Indoor communication address 2- Set in factory
--	--	--	--	--	0	1	0	Indoor communication address 3 - Set in factory
--	--	--	--	--	0	1	1	Indoor communication address 4 (AU182 is forbidden to use)
--	--	--	--	--	1	0	0	Indoor communication address 5 (AU182 is forbidden to use)
--	--	--	--	--	1	0	1	Indoor communication address 6 (AU182 is forbidden to use)
--	--	--	--	--	1	1	0	Indoor communication address 7 (AU182 is forbidden to use)
--	--	--	--	--	1	1	1	Indoor communication address 8 (AU182 is forbidden to use)

AS072 setting when out of factory

SW01

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

SW02

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

AS092 setting when out of factory

SW01

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

SW02

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF

AS122 setting when out of factory

SW01

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

SW02

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Note: The above dip switches are correlative to the system security, so please confirm the conformity between the unit and the dip switch. The incorrect dip switch setting will result in the system wrong operation or the wrong failure diagnosis.

2. Cooling operation

2.1 The set temperature in cooling: TS=the set temp. on remote controller

2.2 After cooling startup, indoor unit will send the frequency code to outdoor according to the temp. difference between the set temp. and the ambient temp.

3. Heating operation

3.1 In heating operation, the set temp. TS=the set temp. on remote controller

3.2 After heating startup, indoor unit will send the frequency code to outdoor according to the temp. difference between the set temp. and the ambient temp.

4. Dry operation

Room temp.-(set temp.+ tolerance) $> 2^{\circ}\text{C}$, indoor operation is identical to the cooling operation, and sends the cooling operation signal to outdoor.

Room temp.-(set temp.+ tolerance) $\leq 2^{\circ}\text{C}$, indoor unit sends the dry operation signal to outdoor.

Room temp. $< 16^{\circ}\text{C}$, indoor unit stops running and sends stop-unit signal to outdoor.

5. Fan operation

Indoor fan motor will run as the fan speed set on the remote controller and indoor unit will send the stop-unit signal to outdoor.

6. Auto operation

If the unit enters Auto mode for the first time, the system will adjust the operation mode according to the room temp. and the set temp.

When room temp. \geq set temp., entering cooling mode;

When room temp. $<$ set temp., entering heating mode.

Mode conversion will be confirmed after compressor has stopped for 15 minutes.

7. Abnormal operation

When outdoor modes from the request of indoor unit conflict, the one entering firstly will take priority.

After indoor receives the ON command from remote controller, it will firstly confirm the outdoor current operation mode. If they are the same mode, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode. After setting on remote controller, if the buzzer sounds two times, that shows abnormal operation. Indoor will run until the outdoor mode and the requested mode of remote controller are the same.

8. Compensation control for discontinuous operation

After the unit starts up in cooling/heating mode, in 3 minutes, the compressor run/stop will not be controlled by the room temp., but after changing the set temp., if compressor stop condition can be met, the system will stop compressor immediately.

9. Anti-cold air control

In heating mode, after compressor startup, the system will control indoor fan motor according to indoor coil temperature. At the beginning of startup, the indoor fan motor can run only when indoor mid-coil temp. is over $28^{\circ}\text{C}(\pm 2^{\circ}\text{C})$. When indoor mid-coil temp. goes down to $18^{\circ}\text{C}(\pm 2^{\circ}\text{C})$, indoor fan motor will stop running.

In defrosting period, indoor fan motor will stop running;

In heating mode, if unit shutoff, indoor fan motor will stop after running for 30 seconds at super low speed.

Note: The above temp. point has taken fuzzy control, and has tolerance $\pm 2^{\circ}\text{C}$ according to the different state.

10. Fan motor control in defrosting

10.1 On receiving outdoor defrosting signal, indoor unit will stop after blowing remaining heat at slow speed for 20 seconds.

10.2 In defrosting period, indoor fan motor stops running.

10.3 Defrosting is over, and indoor motor will run as anti-cold air state.

11. Blowing remaining heat operation

When the unit shuts off in heating mode or the thermostat is OFF, indoor motor will stop running after running at super low speed for 30 seconds.

12. Anti-freezed protection (invalid in heating mode)

When compressor has run for over 5 minutes, to prevent indoor evaporator freezing (in cooling/dry mode), if indoor mid-coil temp. is below 0 degree, compressor will stop. When indoor mid-coil temp. is over about 10 degree, the unit can run. After compressor has stopped for 3 minutes, the unit can re-start up.

Note: The above temp. point has taken fuzzy control, and has tolerance $\pm 1^{\circ}\text{C}$ according to the different state.

13. Overload protection in heating mode

It is valid only in heating mode, if indoor mid-coil temp. is over about 65 degree continuously for 10 seconds, indoor will stop; while when indoor mid-coil temp. is below 52 degree, indoor will resume.

Note: The above temp. point has taken fuzzy control, and has tolerance $\pm 1^{\circ}\text{C}$ according to the different state.

14. Timer operation

TIMER ON/TIMER OFF/TIMER ON/OFF. Timer will count according to the time difference between the TIMER clock and the present clock. In TIMER state, TIMER indicator will be ON.

15. SLEEP function

In cooling/dry mode, after running for 1 hour, the set temp. will increase 1°C , another 1 hour later, the set temp. will increase 1°C again, then 6 hours later, it will stop.

In heating mode, after running for 1 hour, the set temp. will reduce 2°C , another 1 hour later, the set temp. will reduce 2°C again, then 3 hours later, the set temp. will increase 1°C , and another 3 hours, it will stop.

16. Auto-restart function

In 5 seconds, press SLEEP button 10 times continuously, the buzzer will sound 4 times and enter auto-restart function. In 5 seconds, press SLEEP 10 times continuously, the buzzer will sound twice and quit auto-restart function. If no SLEEP button, press SWING as the same method.

17. Setting indoor unit number

In OFF state, press emergency switch until 15 seconds later, the buzzer sounds 4 times, indoor will enter the indoor unit number setting state, the set method is as follow:

Press ON/OFF button (from OFF mode to ON mode), the times of SLEEP button to be pressed is the set unit number, then press ON/OFF button to quit unit number setting state, at this time, indoor unit is at OFF state, the display panel will display this unit number. For example, press SLEEP button once, it is No. 1 unit; press twice, it is No. 2 unit, and so on.

In OFF state, press emergency switch until 15 seconds later, the buzzer sounds 5 times, the display panel will display this unit number and you can check if there are repeated numbers.

18. Setting method of temperature compensation

Set the temperature compensation in heating mode with the remote controller. No compensation in cooling mode. In 24°C heating mode, press SLEEP button 8 times continuously, indoor buzzer sounds 5 times, that shows temp. compensation works. Switch on the unit in heating mode by the remote controller, press TEMP button to set the set temp., so temperature compensation=the current set temp. - 24°C . For example, if the set temp. is 24°C , the temp. compensation is 0°C ; if the set temp. is 25°C , the temp. compensation is 1°C . Please do not set the minus temp. compensation, that is to say the min. temp. compensation is 0°C .

If setting is finished, press ON/OFF button, then indoor buzzer will sound 4 times, that shows the unit quits the temp. compensation.

6. Diagnostic code and trouble shooting

6.1.1. Diagnostic code for AU18,22,28,342XHERA

FAILURE CODE	STATE OF LED 5-4-3-2-1	TROUBLE SHOOTING	POSSIBLE REASONS
1	○○○○●	Faulty defrost sensor Te	Sensor disconnected, or broken, or short circuit
2	○○○●○	Faulty sensor Tao	Sensor disconnected, or broken, or short circuit
3	○○○●●	Faulty sensor Ts	Sensor disconnected, or broken, or short circuit
4	○○●○○	Faulty sensor Td	Sensor disconnected, or broken, or short circuit
5	○○●○●	Input overcurrent	Over current of the system, or broken of the current sensor, or malfunction with indoor or outdoor fan motors, or faulty PCB.
6	○○●●○	Abnormal communication between indoor and outdoor units	Wrong connection, or the wires be disconnected, or wrong address setting of indoor units, or faulty PCB, or faulty power supply
9	○●○○●	System high pressure protection	High pressure switch is disconnected, or high pressure switch worked, or Tc too high and faulty outdoor fan motor when cooling, or faulty indoor fan motors when heating, or refrigerant overabundance
10	○●○●○	System low pressure protection	Low pressure switch is disconnected, or low pressure switch worked, or Te too low and faulty outdoor fan motors when heating, or faulty indoor fan motor when cooling, or refrigerant shortage
11	○●○●●	IPM protection	IPM over current, or short circuit, or IPM temperature too high, or IPM input voltage too low, or faulty SPDU.
12	○●●○○	EEPROM fault	Faulty outdoor unit PCB
13	○●●○●	Over hot protection of compressor	Serious lack of refrigerant of the system, or the ambient temperature too high, or PMVs be blocked
15	○●●●●	DC fan motor fault	Fan is blocked, or the terminal is disconnected from the PCB
16	●○○○○	Faulty 4-way valve switching on	Coil of 4-way valve is disconnected, or faulty outdoor PCB
17	●○○○●	Faulty sensor Tc	Sensor disconnected, or broken, or short circuit
21	●○●○●	Faulty sensor Toci	Sensor disconnected, or broken, or short circuit
25	●●○○●	Abnormal communication between main PCB and SPDU	Communication cables broken, or not be well connected, or faulty main PCB, or faulty SPDU
26	●●○●○	Compressor be locked	Faulty compressor or SPDU
27	●●○●●	Compressor vibration too big	Faulty compressor
28	●●●○○	Compressor lose position	Faulty SPDU
29	●●●○●	Faulty compressor start	Faulty compressor or SPDU
30	●●●●○	Faulty position checking circuit	Faulty SPDU
31	●●●●●	Compressor broken	Faulty compressor or SPDU

Take off the plastic valve cover, you can find the LEDs near to the communication terminal.

Symbol● means the LED is ON. Symbol○ means the LED is OFF.

6.1.2. Diagnostic code for AB*XCERA,AC*XCERA

TROUBLE SHOOTING	FAILURE CODE (TIMER LED OF INDOOR RECEIVER BOARD FLASHES TIMES)	POSSIBLE REASONS
Faulty temperature sensor Tai	ONCE ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tc1	TWICE ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tc2	3 TIMES ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tm	4 TIMES ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty EEPROM on indoor unit PCB	5 TIMES	Faulty indoor unit PCB
Abnormal communication between indoor and outdoor unit	6 TIMES ✕	Wrong connection, or the wires be disconnected, or wrong address setting of indoor units, or faulty power supply or faulty PCB
Abnormal communication between wired controller and indoor unit PCB	7 TIMES ✕	Wrong connection, or use the wired controller be disconnected, faulty PCB
Drainage system abnormal	8 TIMES ✕	Pump motor disconnected, or at wrong position, or the float switch broken down or the float switch disconnected, or at wrong position
Indoor unit address repeated	9 TIMES	Wrong setting of indoor unit address
Central control address repeated	10 TIMES	Wrong setting of centralized control indoor unit address
Faulty indoor unit fan motor	11 TIMES	Fan is blocked, or the terminal is disconnected from the PCB, or faulty indoor unit PCB
Faulty driver of indoor unit fan motor	12 TIMES	Faulty indoor unit PCB
Abnormal communication between chip TMP/807 and chip TMP/846	14 TIMES ✕	Faulty indoor unit PCB
Malfunction on outdoor unit	20 TIMES	Check the outdoor unit failure code

Note:

1. Please contact the installers or distributors when trouble happens to repair it.
2. Turn the power off and power on again, if the failure code recurs, please inform the franchiser.
3. Failure codes marked with ✕ are resumable.

6.1.3. Diagnostic code for AD*XLERA

TROUBLE SHOOTING (indoor unit)	FAILURE CODE (CHECK THE WIRED REMOTE CONTROLLER)	POSSIBLE REASONS
Faulty temperature sensor Tai	01 *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tc1	02 *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tc2	03 *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tm	04 *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty EEPROM on indoor unit PCB	05	Faulty indoor unit PCB
Abnormal communication between indoor and outdoor unit	06 *	Wrong connection, or the wires be disconnected, or wrong address setting of indoor units, or faulty power supply or faulty PCB
Abnormal communication between wired controller and indoor unit PCB	07 *	Wrong connection, or use the wired controller be disconnected, faulty PCB
Drainage system abnormal	08 *	The short-connector disconnected, or at wrong position, or the float switch broken down or the float switch disconnected, or at wrong position
Indoor unit address repeated	09	Wrong setting of indoor unit address
Abnormal communication between chip TMP/807 and chip TMP/846	0E	Faulty indoor unit PCB
Faulty defrost sensor Te	14 *	Sensor disconnected, or broken, or short circuit
Faulty sensor Tao	15 *	Sensor disconnected, or broken, or short circuit
Faulty sensor Ts	16 *	Sensor disconnected, or broken, or short circuit
Faulty sensor Td	17 *	Sensor disconnected, or broken, or short circuit
Input overcurrent	19	Over current of the system, or broken of the current sensor, or malfunction with indoor or outdoor fan motors, or faulty PCB.
System high pressure protection	1E *	High pressure switch is disconnected, or high pressure switch worked, or Tc too high and faulty outdoor fan motor when cooling, or faulty indoor fan motors when heating, or refrigerant overabundance
System low pressure protection	1F *	Low pressure switch is disconnected, or low pressure switch worked, or Te too low and faulty outdoor fan motors when heating, or faulty indoor fan motor when cooling, or refrigerant shortage
IPM protection	20	IPM over current, or short circuit, or IPM temperature too high, or IPM input voltage too low, or faulty SPDU(or ISPM).
EEPROM fault	21	Faulty outdoor unit PCB

TROUBLE SHOOTING (indoor unit)	FAILURE CODE (CHECK THE WIRED REMOTE CONTROLLER)	POSSIBLE REASONS
Over hot protection of compressor	22	Serious lack of refrigerant of the system, or the ambient temperature too high, or PMVs be blocked
Over hot protection of SPDU (or ISPM)	23	Ambient temperature too high, or outdoor fan be blocked, or bad air circulation of outdoor unit
DC fan motor fault	24	Fan is blocked, or the terminal is disconnected from the PCB
Faulty 4-way valve switching on	25	Coil of 4-way valve is disconnected, or faulty outdoor PCB
Faulty sensor Tc	26 *	Sensor disconnected, or broken, or short circuit
Faulty sensor Toci	2A *	Sensor disconnected, or broken, or short circuit
Low voltage protection	2C	VDC<194V, too low voltage from power source
High voltage protection	2D	VDC>400V, too high voltage from power source
Abnormal communication between main PCB and SPDU(or ISPM)	2E	Communication cables broken, or not be well connected, or faulty main PCB, or faulty SPDU (or ISPM)
Compressor be locked	32	Faulty compressor or SPDU(or ISPM)
Compressor vibration too big	33	Faulty compressor
Compressor lose position	34	Faulty SPDU(or ISPM)
Faulty compressor start	35	Faulty compressor or SPDU(or ISPM)
Faulty position checking circuit	37	Faulty SPDU(or ISPM)
Compressor broken	38	Faulty compressor or SPDU(or ISPM)

NOTE!
1. Please contact the installers or distributors when trouble happens to repair it. 2. Turn the power off and power on again, if the failure code recurs, please inform the franchiser. 3. Failure codes marked with * are resumable.

6.1.4. Diagnostic code for AF*XCERA

TROUBLE SHOOTING	FAILURE CODE (TIMER LED OF INDOOR RECEIVER BOARD FLASHES TIMES)	POSSIBLE REASONS
Faulty temperature sensor Tai	ONCE *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tc1	TWICE *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tc2	3 TIMES *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor Tm	4 TIMES *	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty EEPROM on indoor unit PCB	5 TIMES	Faulty indoor unit PCB
Abnormal communication between indoor and outdoor unit	6 TIMES *	Wrong connection, or the wires be disconnected, or wrong address setting of indoor units, or faulty PCB, or faulty power supply
Indoor unit address repeated	9 TIMES	Wrong setting of indoor unit address
Faulty indoor unit fan motor	11 TIMES	Fan is blocked, or the terminal is disconnected from the PCB, or faulty indoor unit PCB
Faulty driver of indoor unit fan motor	12 TIMES	Faulty indoor unit PCB
Malfunction on outdoor unit	20 TIMES	Check the outdoor unit failure code

NOTE!

1. Please contact the installers or distributors when trouble happens to repair it.
2. Turn the power off and power on again, if the failure code recurs, please inform the franchiser.
3. Failure codes marked with * are resumable.

6.1.5. Diagnostic code for AS*XVERA

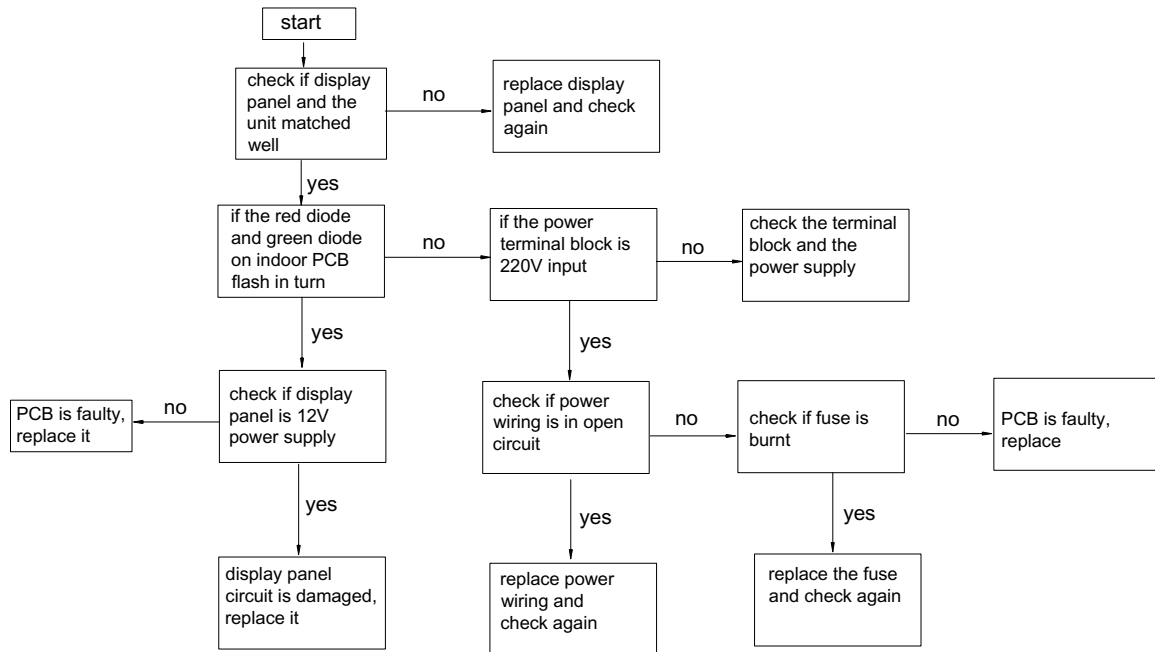
TROUBLE SHOOTING	FAILURE CODE (DISPLAYED ON LCD)	POSSIBLE REASONS
Faulty temperature sensor T_{ai}	1 ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor T_{c1}	2 ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor T_{c2}	3 ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature sensor T_m	4 ✕	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty EEPROM on indoor unit PCB	5	Faulty indoor unit PCB
Abnormal communication between indoor and outdoor unit	6 ✕	Wrong connection, or the wires be disconnected, or wrong address setting of indoor units, or faulty PCB, or faulty power supply
Indoor unit address repeated	9	Wrong setting of indoor unit address
Central control address repeated	10	Wrong setting of centralized control indoor unit address
Faulty indoor unit fan motor	11	Fan is blocked, or the terminal is disconnected from the PCB, or faulty indoor unit PCB
Faulty driver of indoor unit fan motor	12	Faulty indoor unit PCB
Malfunction on outdoor unit	20	Check the outdoor unit

Note:

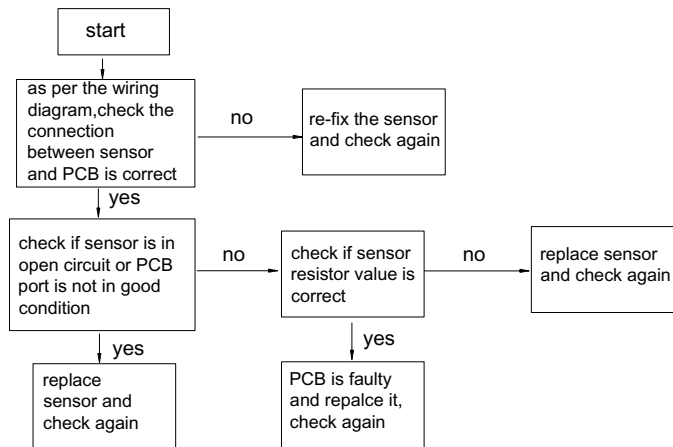
1. Please contact the installers or distributors when trouble happens to repair it.
2. Turn the power off and power on again, if the failure code recurs, please change the indoor unit PCB.
3. Failure codes marked with ✕ are resumable.

6.2. X MULTI Trouble Shooting:

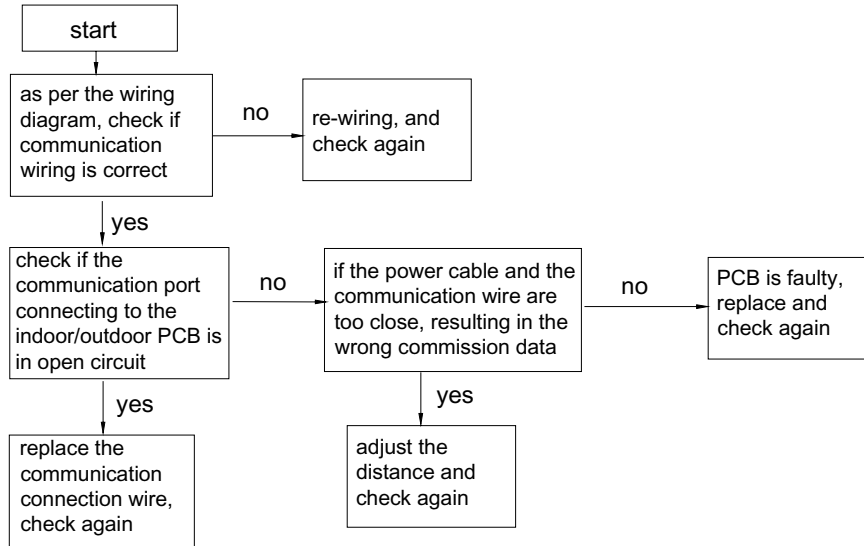
Trouble 1: No display on the operation panel



Trouble 2: Sensor failure



Trouble 3: Communication failure between indoor and outdoor



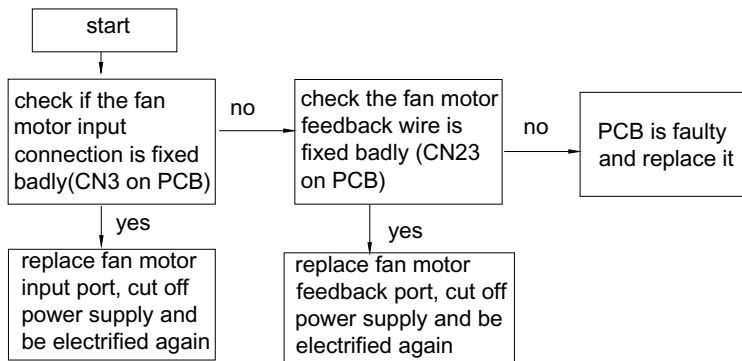
Trouble 4: Indoor PCB EEPROM data is wrong

- 1.If the failure occurs when being electrified for the first time, that shows EEPROM (8-bit pin) not fixed firmly or damaged.
- 2.If the failure occurs when running, that shows EEPROM is faulty and need to be replaced.

Trouble 5: Indoor repeated unit number

- 1.Firstly query the unit number: switch off the unit, press SLEEP for about 15 seconds until the buzzer sounds 5 times, on the display panel there will be digit, which is indoor number. By this method,you can check if there is repeated unit number, if yes, please re-set the number as per the unit number setting procedure.
- 2.Re-set the unit number directly, the unit with outdoor pipe A is No. 1; the unit with outdoor pipe B is No. 2; the unit with pipe C is No.3

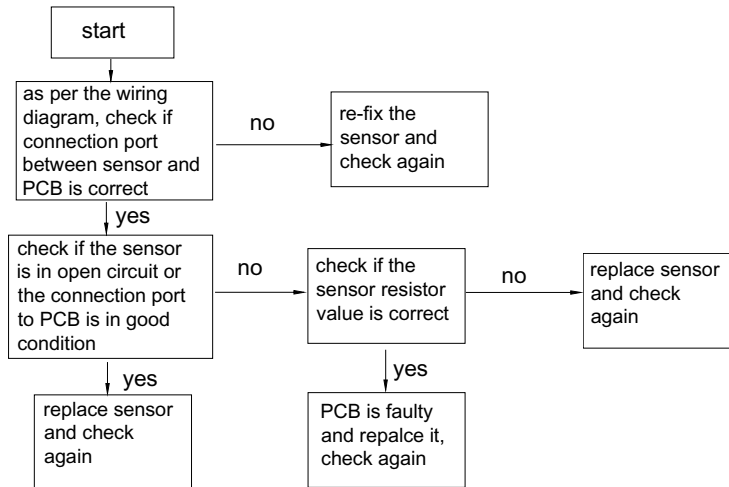
Trouble 6: Indoor fan motor failure, AC fan motor has not 50Hz zero-crossing detection



Trouble 7: Outdoor unit failure

Check the failure code on outdoor indicator board (5-lamp)

Trouble 8: Outdoor unit alarms sensor failure



Trouble 9: AC current over current protection or current transducer damaged, or compressor blocked rotor, compressor great vibration, compressor abnormal startup, state detecting circuit abnormal or compressor damaged.

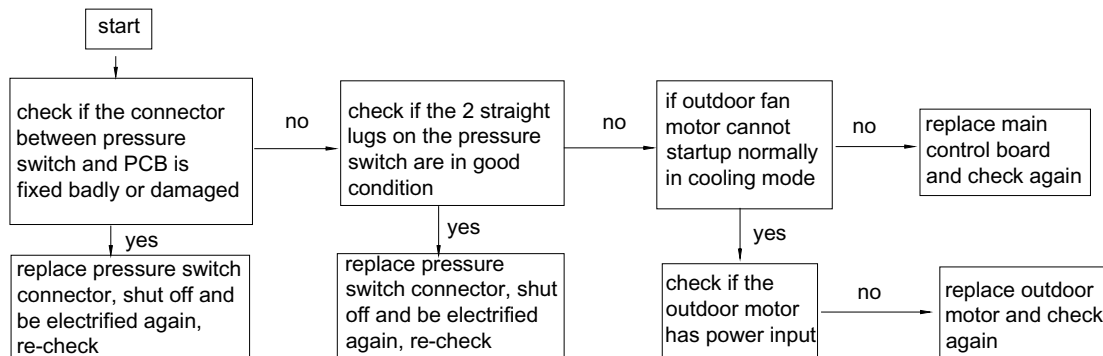
The former twice failure can be resumed automatically, if outdoor board occurs this failure always, and can not be resumed for a long time, that shows:

1. Power module (SPDU) damaged, please replace the power module, then re-wiring as per the wiring diagram (70% possibility)
2. Short circuit in power board results in the power module damaged (15% possibility)
3. Damaged compressor results in this failure (10% possibility)
4. Main control board is faulty, replace it (5% possibility)

Trouble 10: High pressure failure

Reasons:

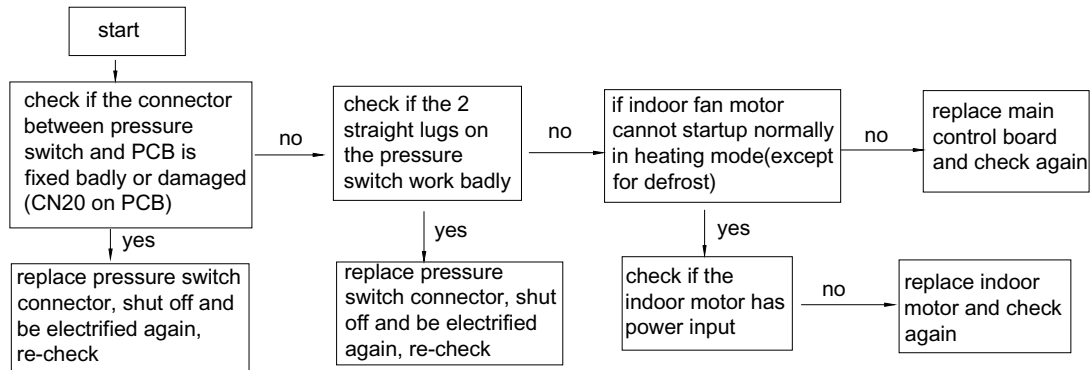
1. Over high system pressure results that the unit stop, and the compressor protection will work. The failure can be resumed.
2. Pressure switch wire is not fixed well or in open circuit.



Failure 11: Low pressure switch failure

Reason: 1. Too low system pressure causes that the unit stops and the compressor protection works, the failure can be resumed.

2. Pressure switch wire is not fixed well or in open circuit.

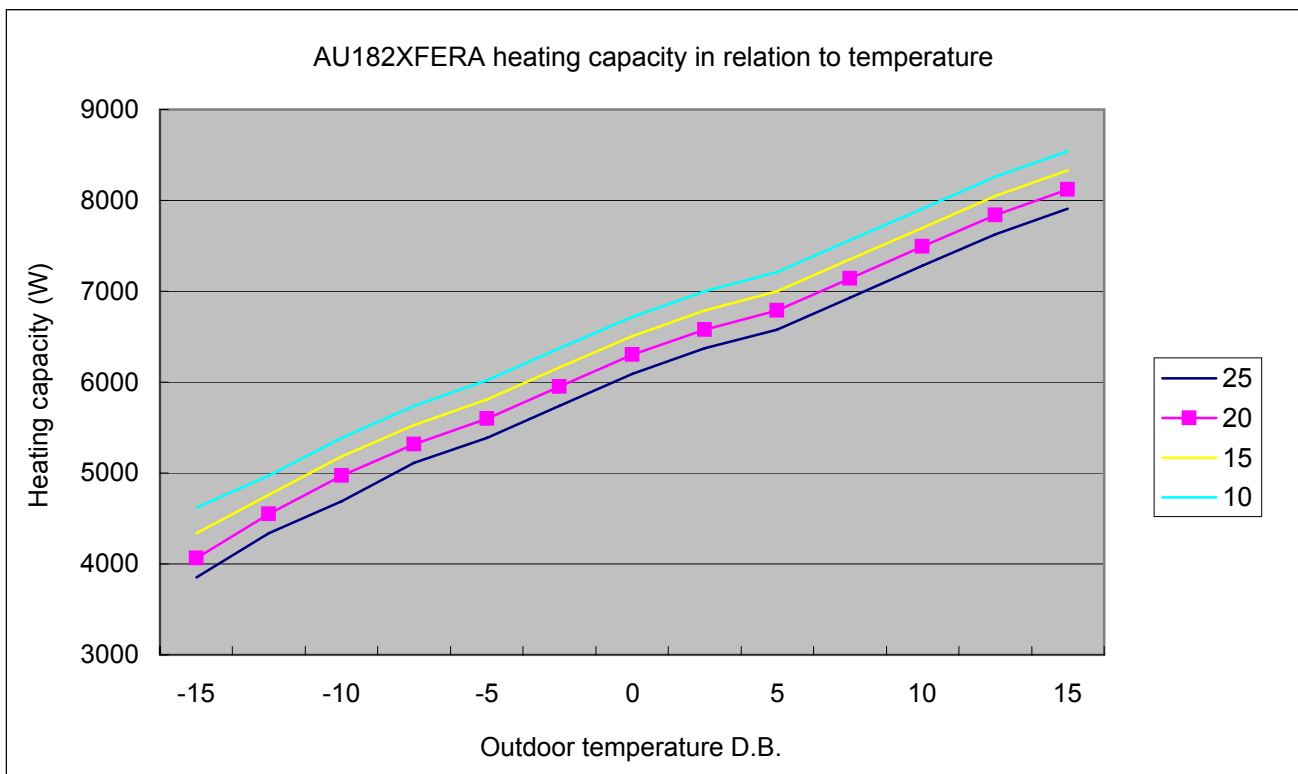
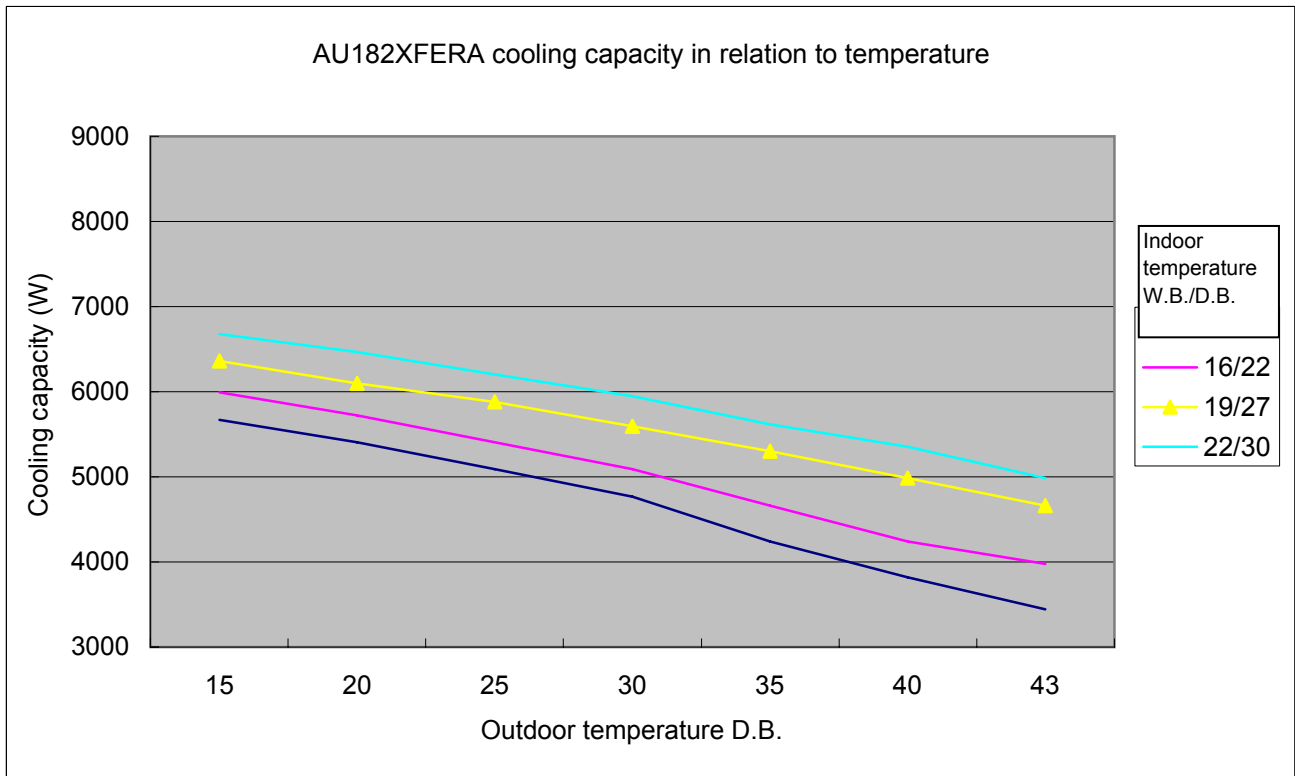


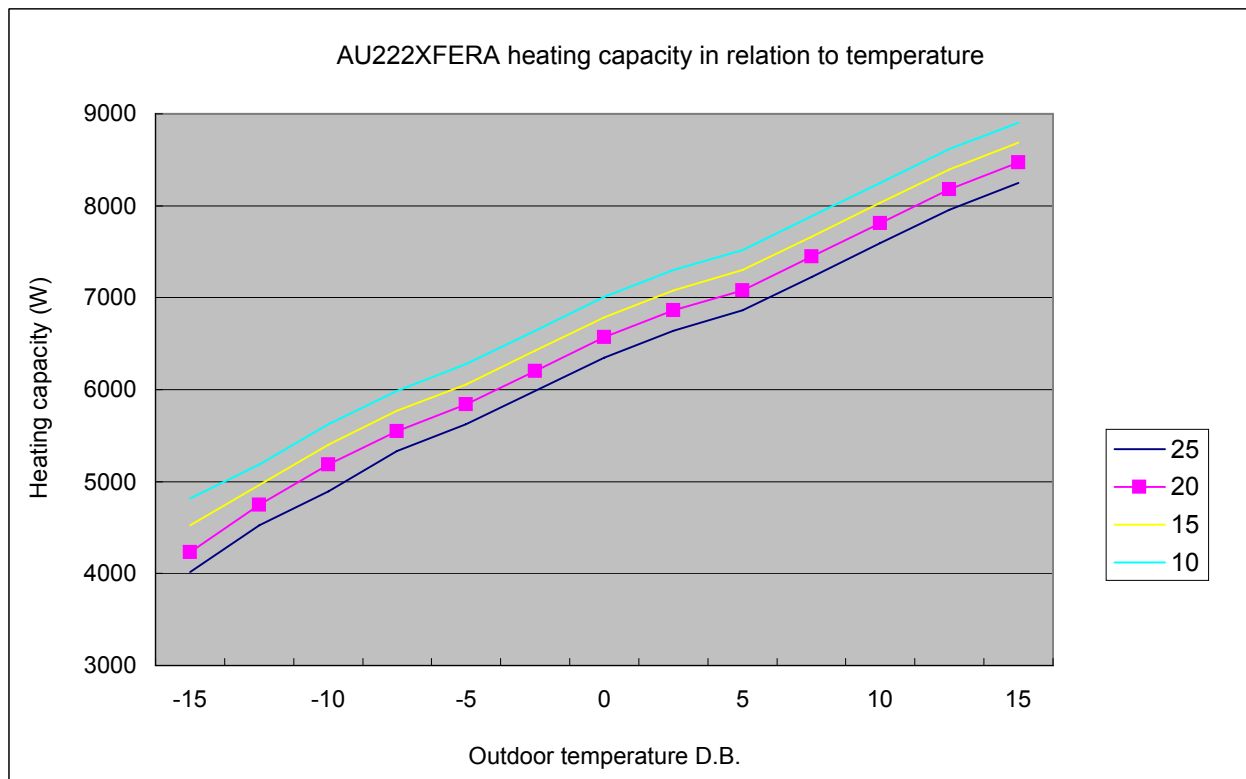
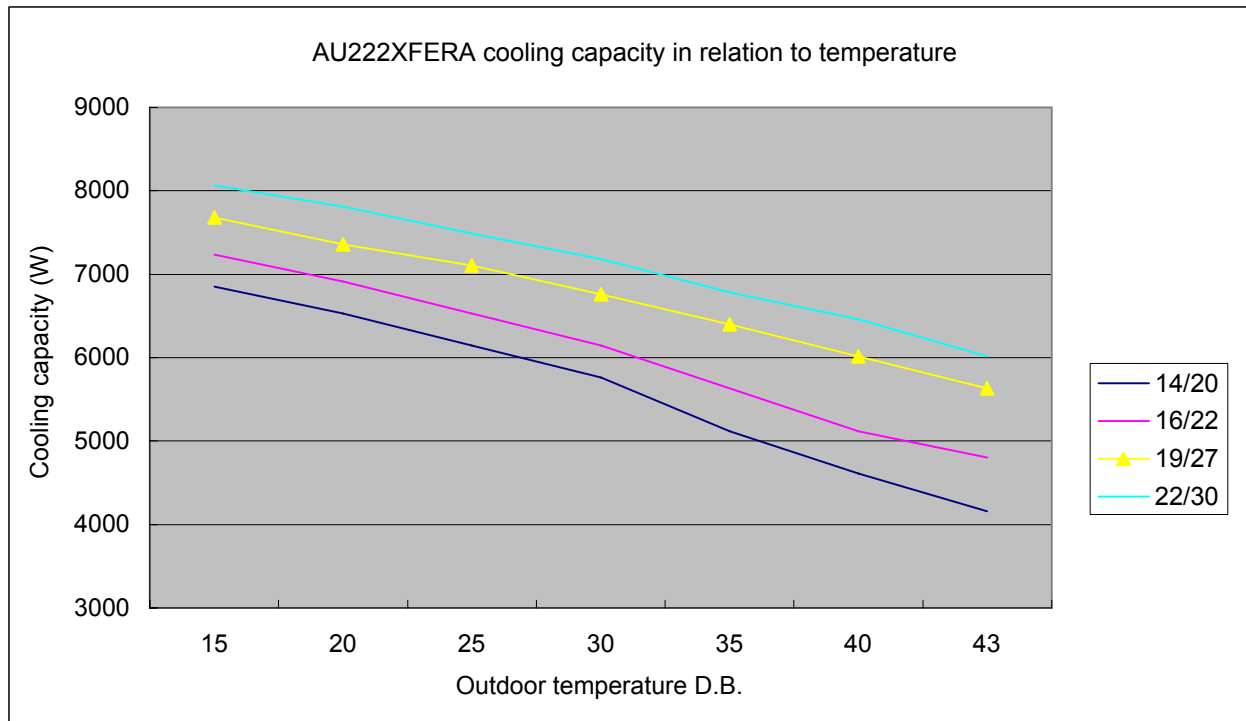
7. X Multi assistant Software

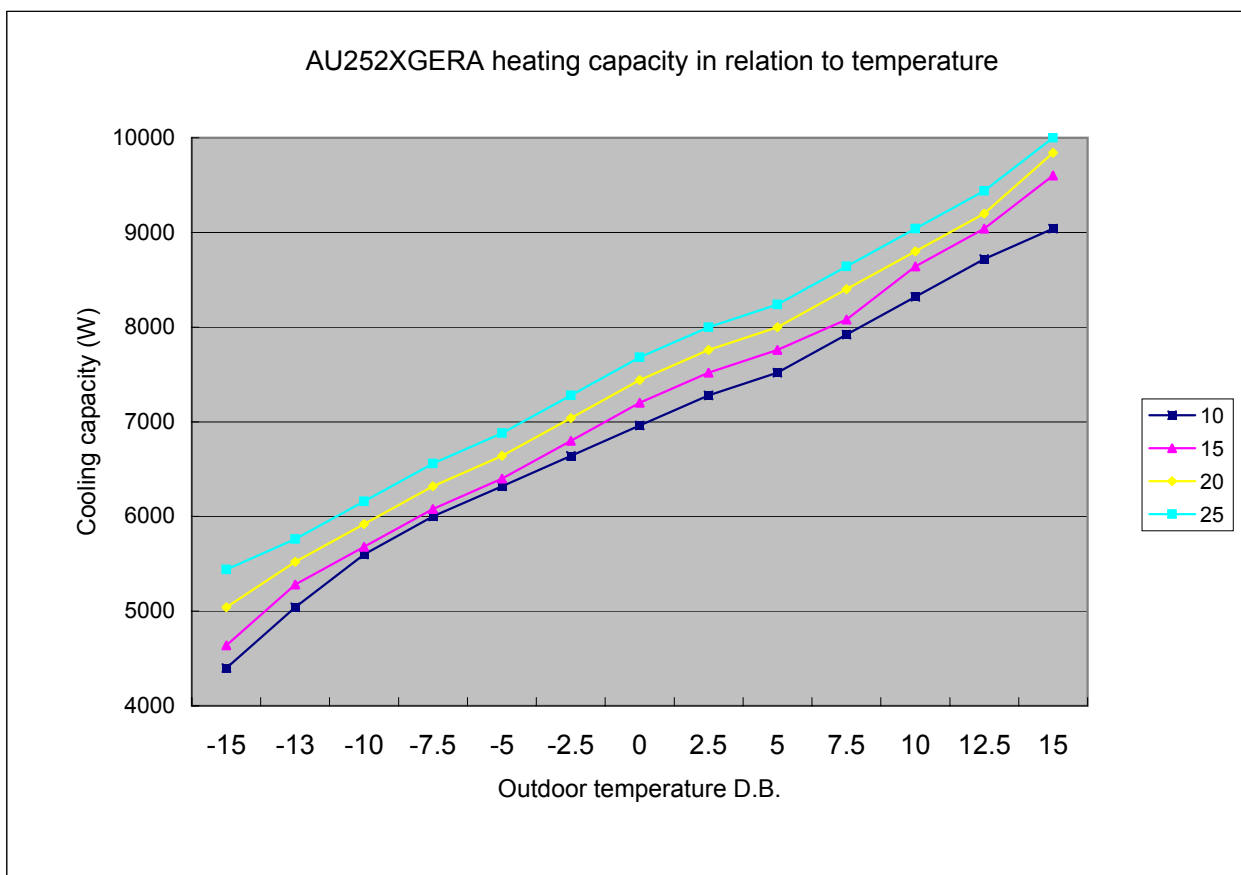
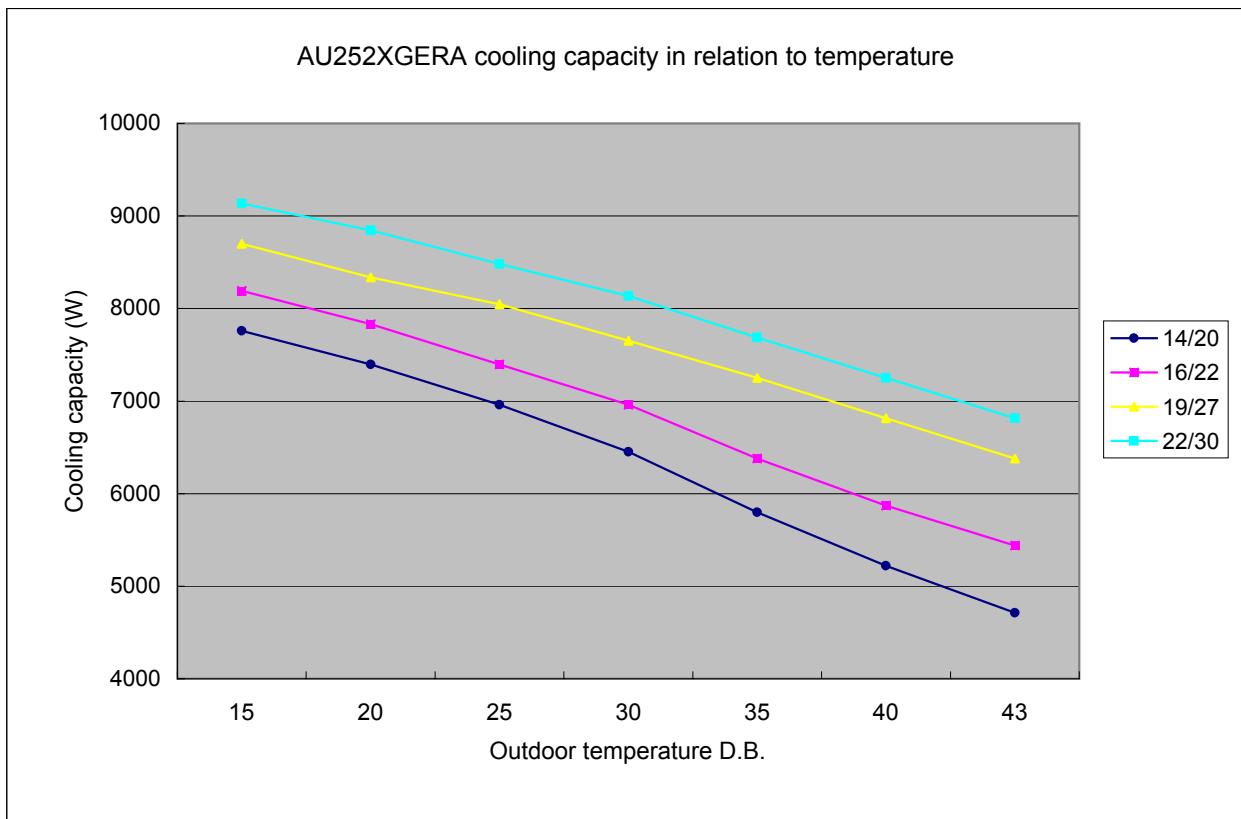
After installation, you can use laptop and Haier device GDGZ-01 to test system , software “X-Multi assistant Software” can help you diagnose system well or not.

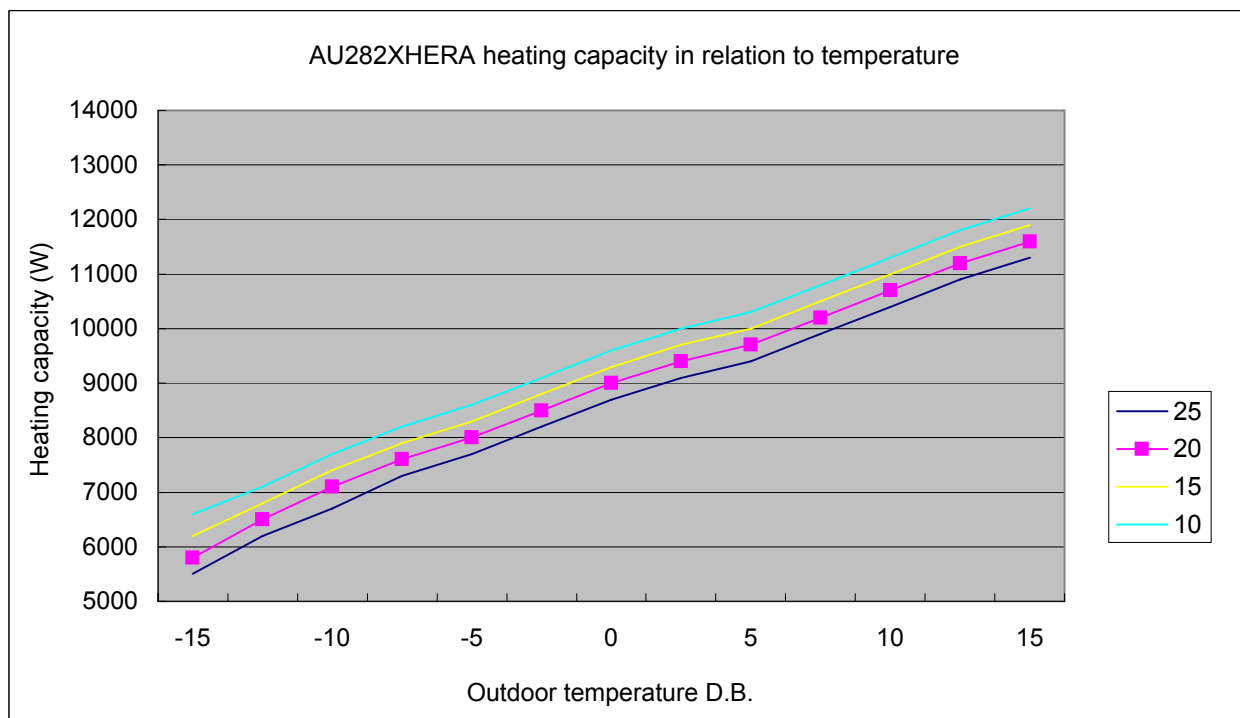
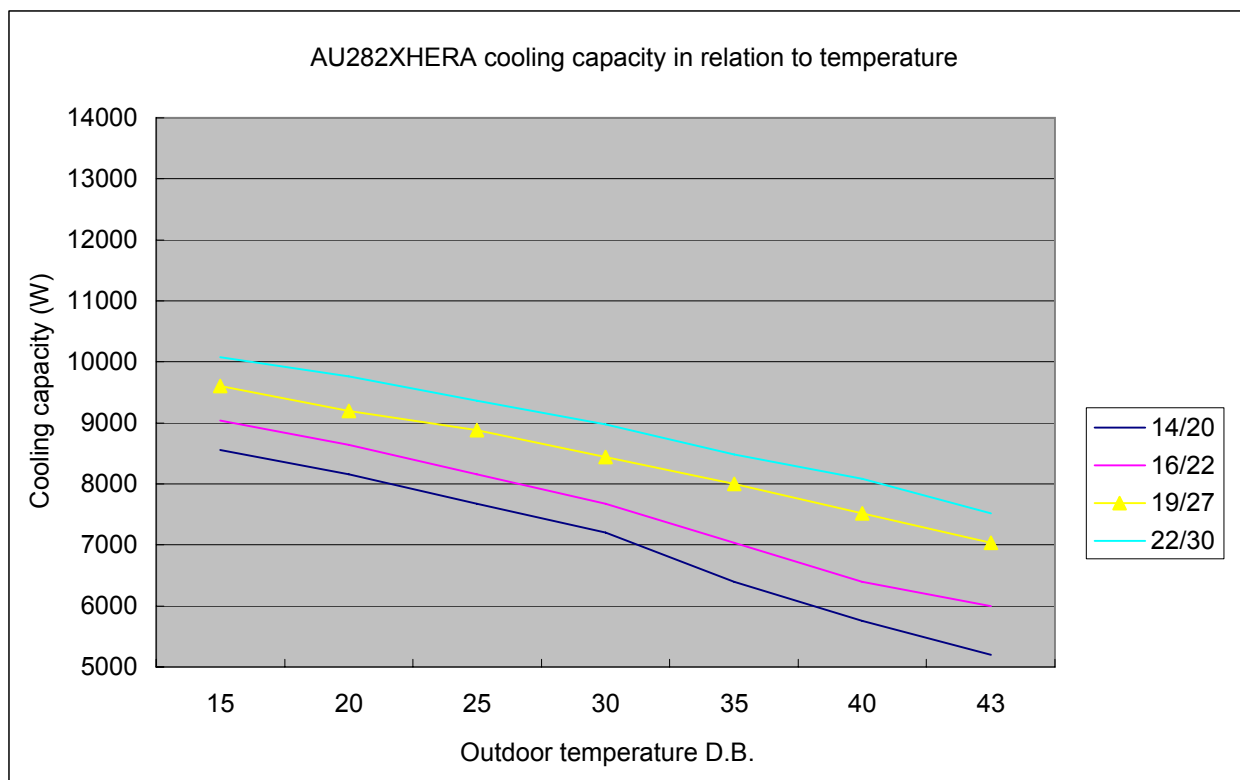


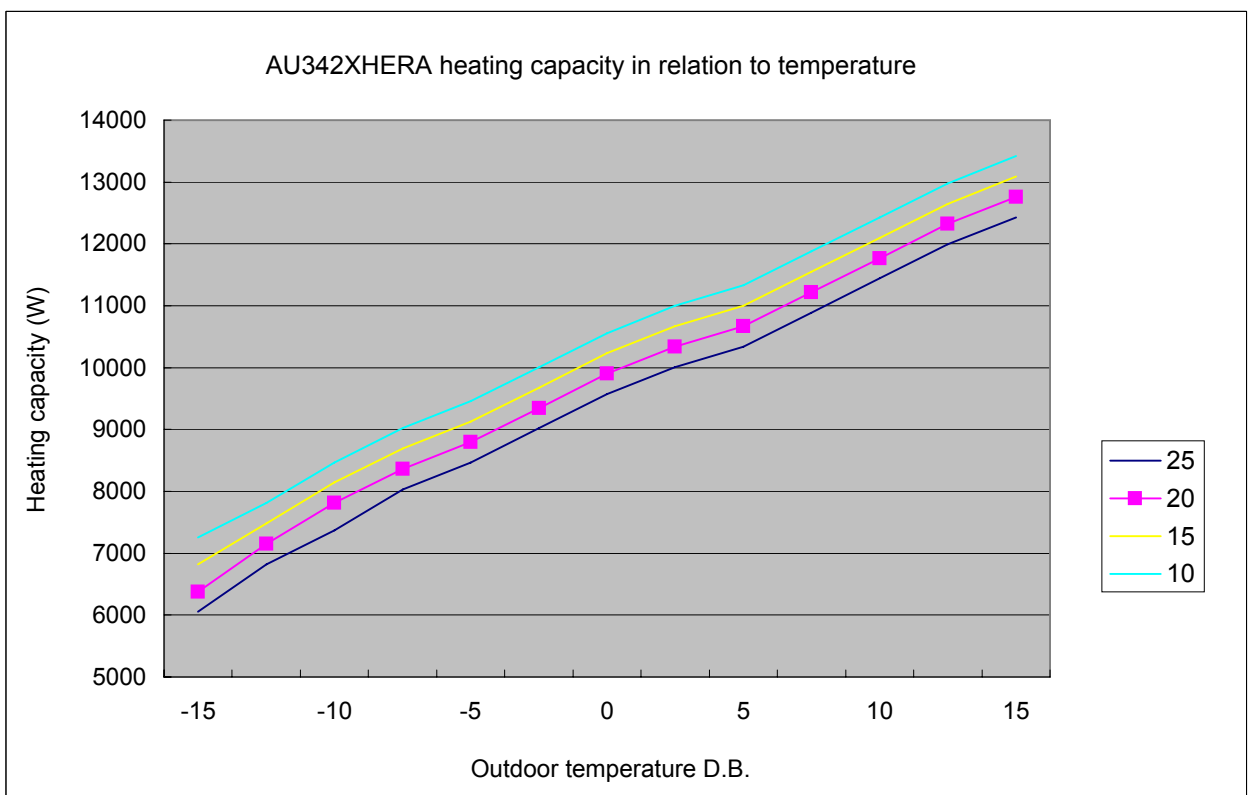
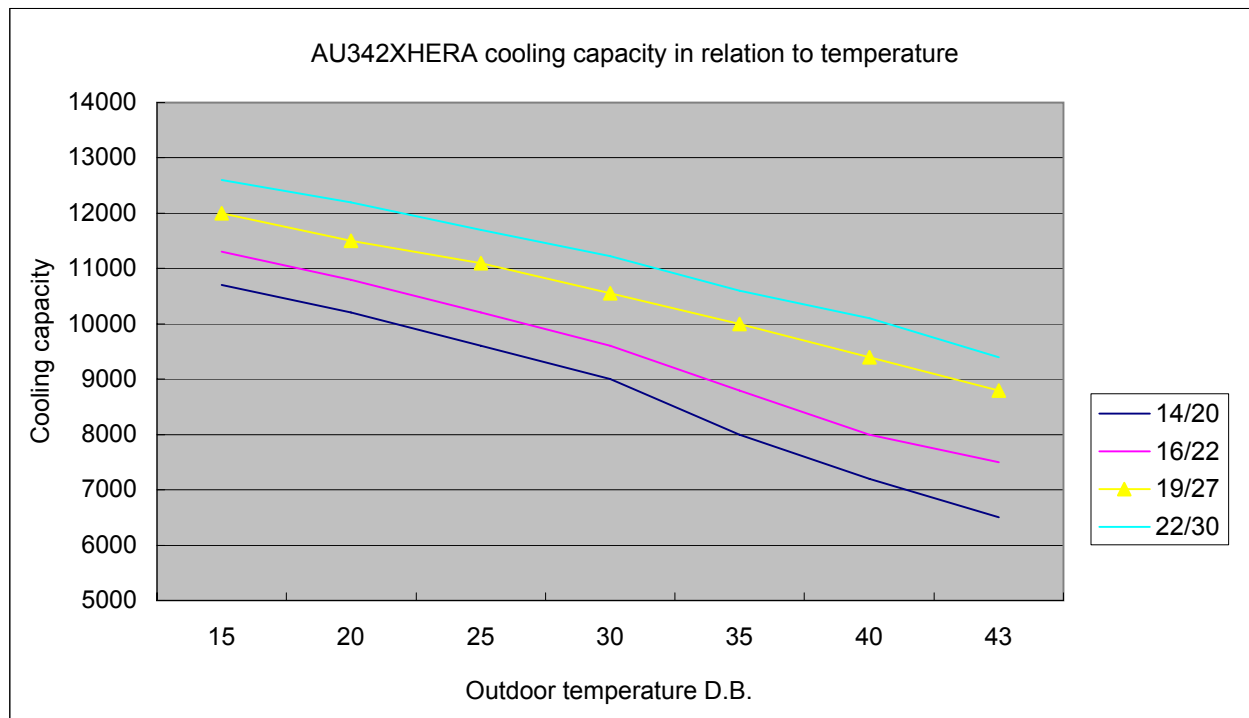
8. Outdoor performance curves

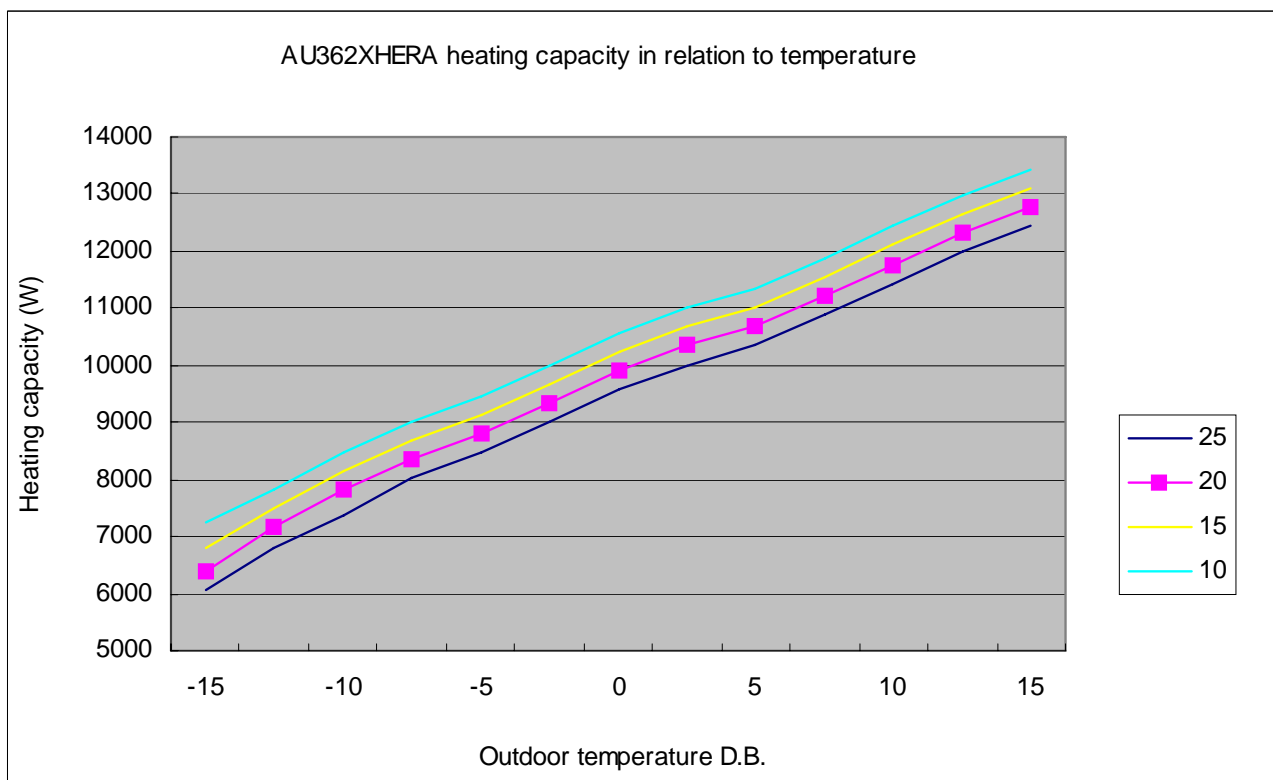
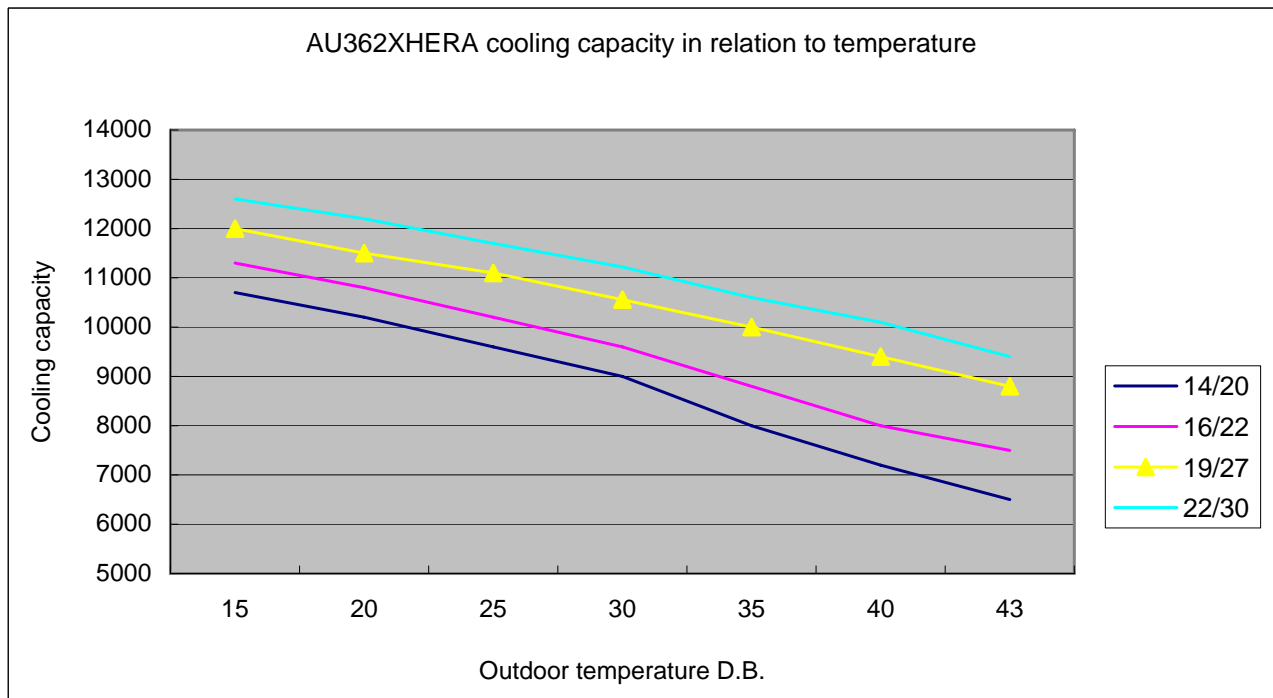












9. Indoor air velocity and temperature distribution curves

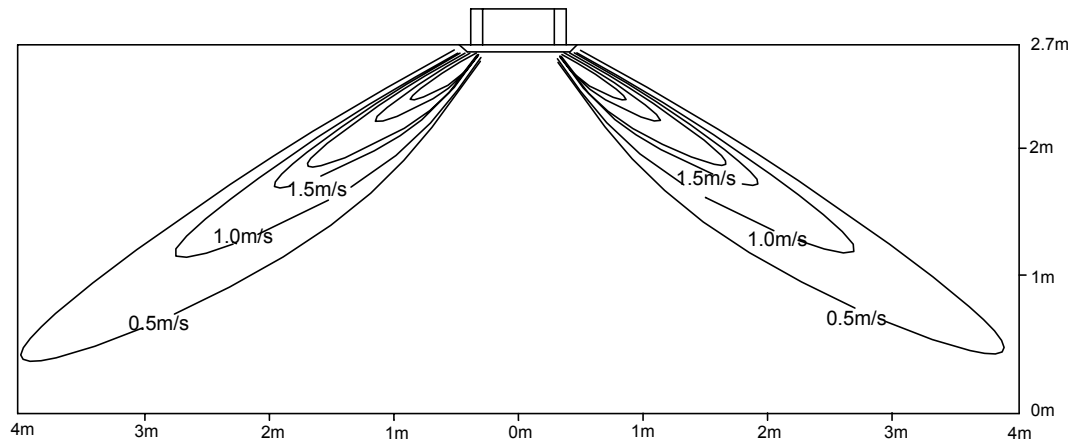
9.1 AB092-182XCERA:

a. Cooling / Air Velocity Distribution

Cooling

Blow angle:40

Air Velocity Distribution

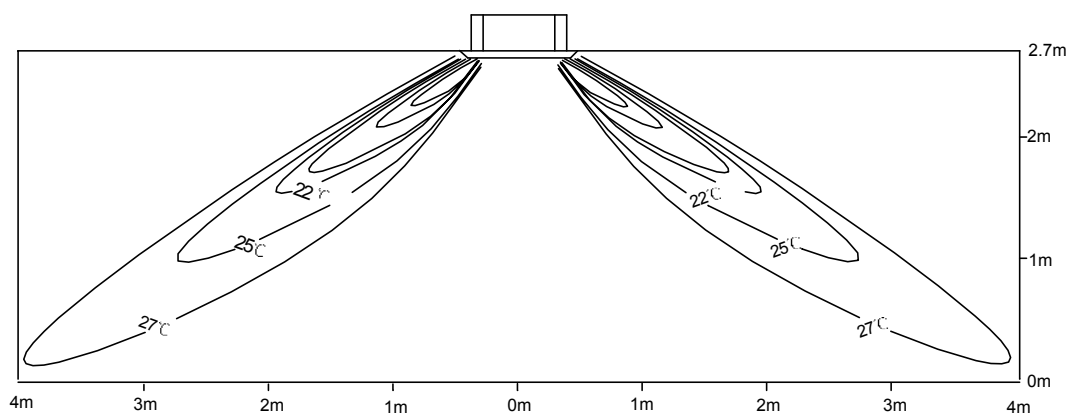


b. Cooling / Temperature Distribution

Cooling

Blow angle:40

Temperature Distribution

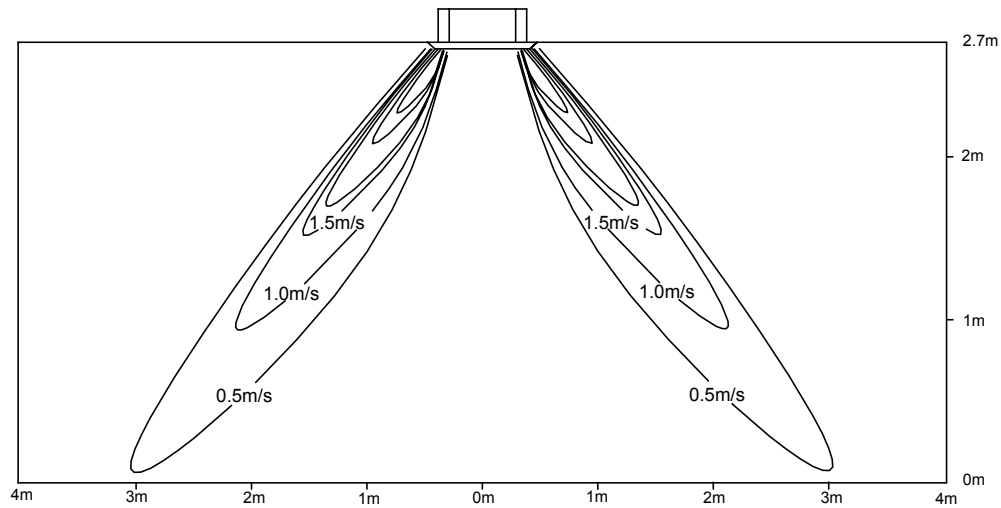


c. Heating / Air Velocity Distribution

Heating

Blow angle: 70

Air velocity Distribution

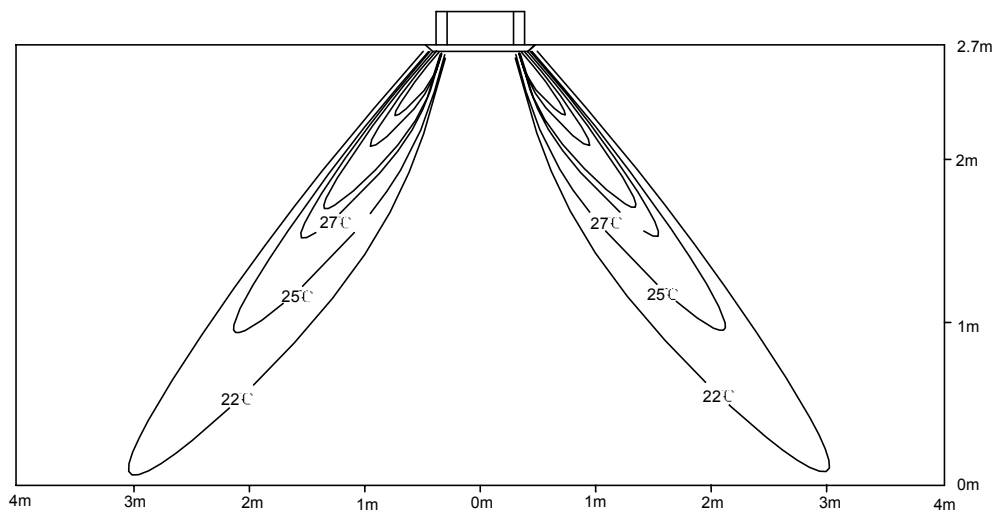


d. Heating / Temperature Distribution

Heating

Blow angle: 70

Temperature Distribution



9.2 AC14/182XCERA:

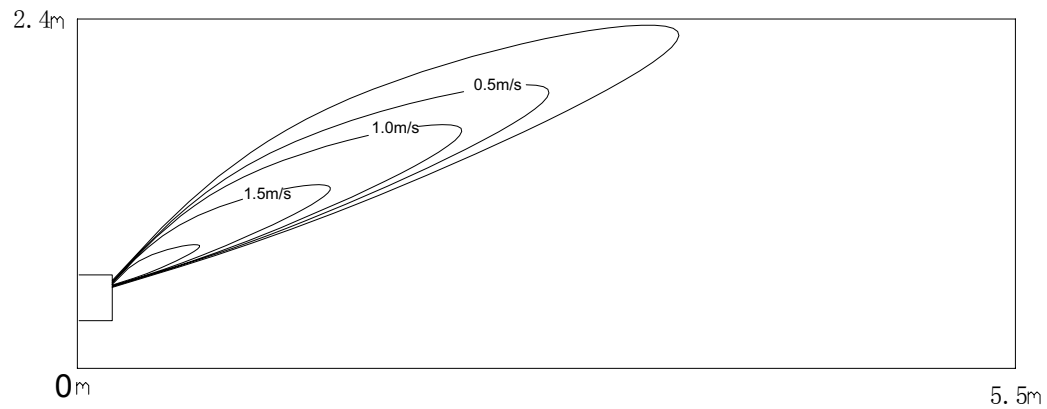
a) Grounding

a. Cooling / Air Velocity Distribution

Cooling

Blow angle: 25

Air Velocity Distribution

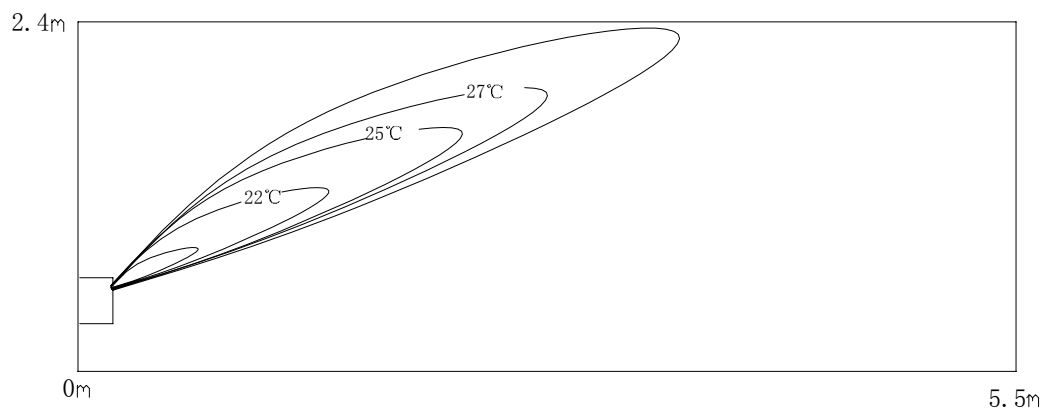


b. Cooling / Temperature Distribution

Cooling

Blow angle: 25

Temperature Distribution



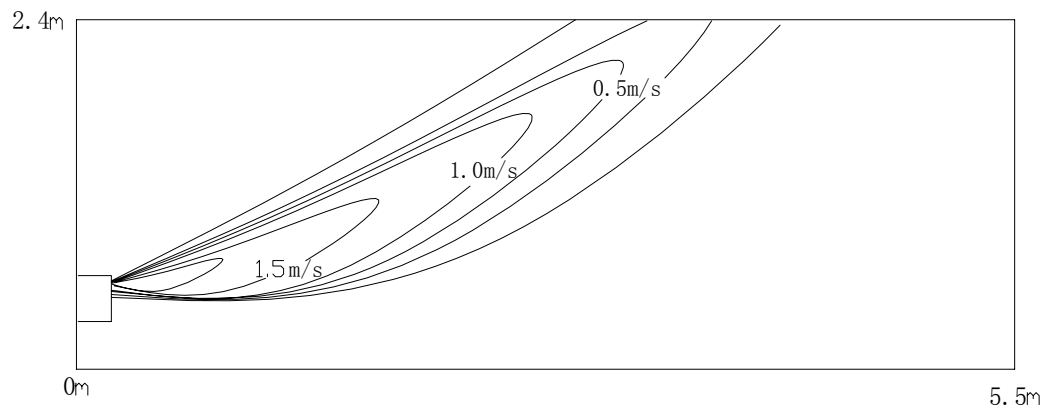
c. Heating / Air Velocity Distribution

Heating

Blow angle:5

Air velocity Distribution

2



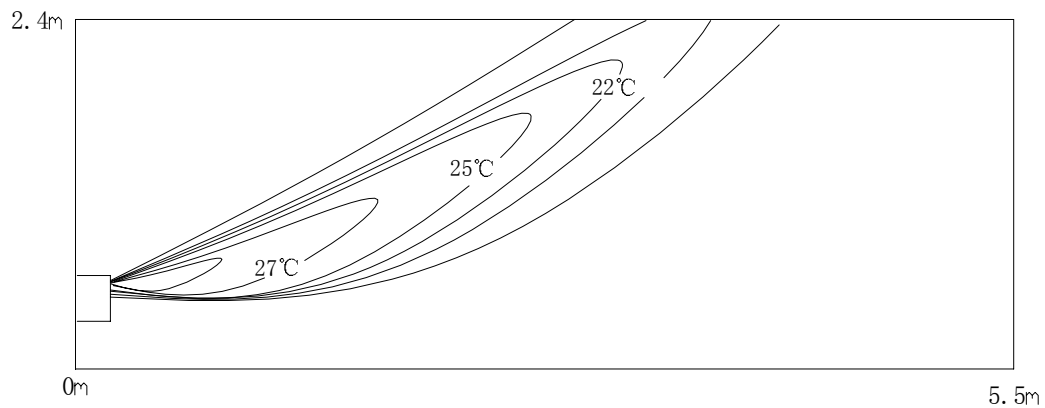
d. Heating / Temperature Distribution

Heating

Blow angle:5

Temperature Distribution

2



b) Ceiling

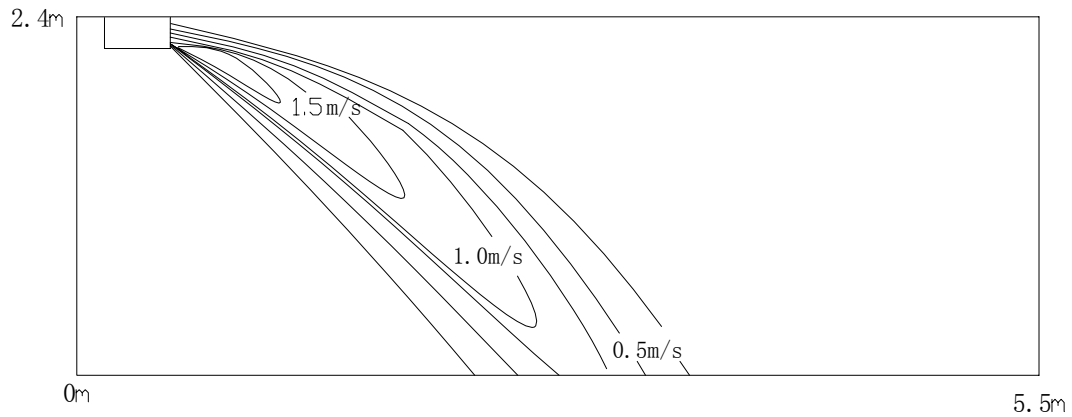
a. Cooling / Air Velocity Distribution

Cooling

Blow angle: 25

Air Velocity Distribution

2



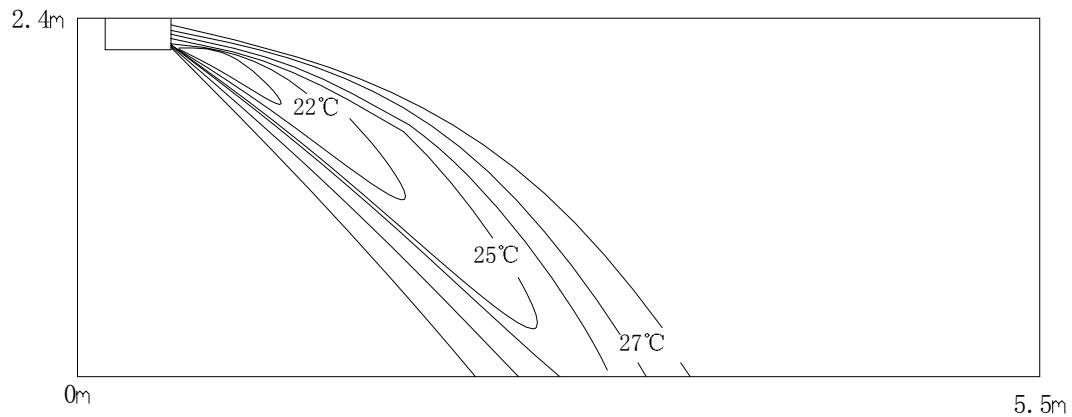
b. Cooling / Temperature Distribution

Cooling

Blow angle: 25

Temperature Distribution

2



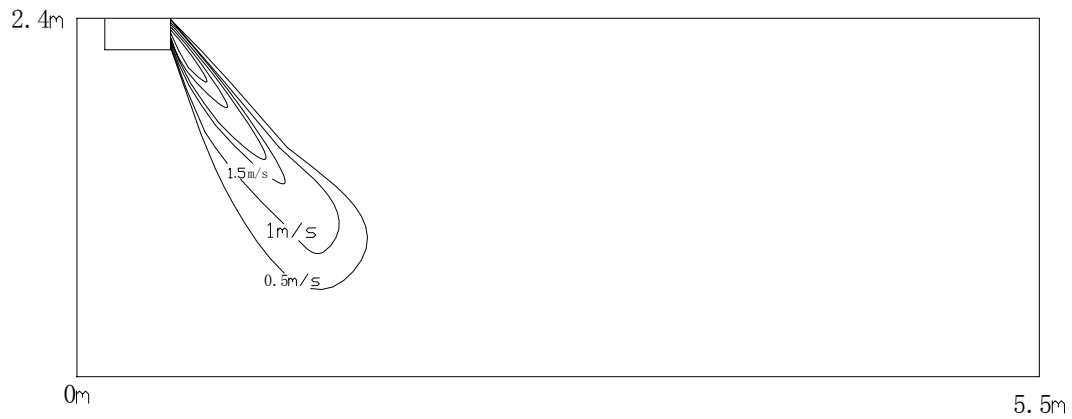
c. Heating / Air Velocity Distribution

Heating

Blow angle: 65

Air velocity Distribution

2



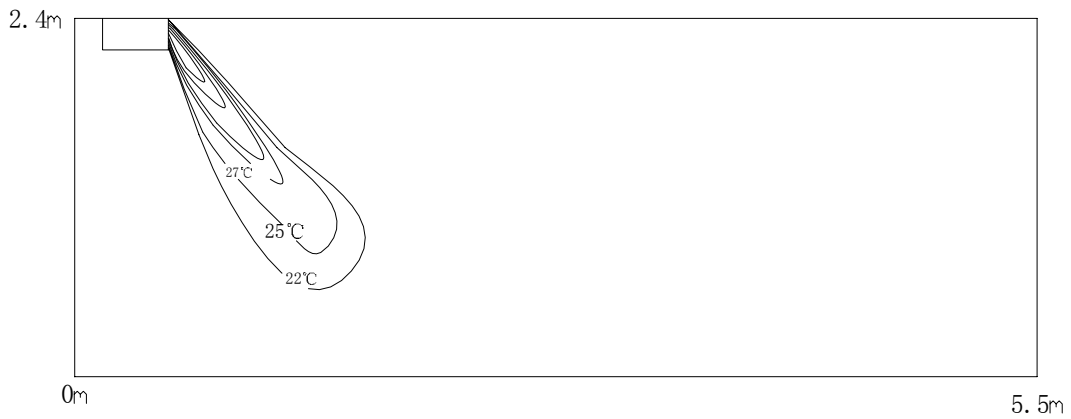
d. Heating / Temperature Distribution

Heating

Blow angle: 65

Temperature Distribution

2



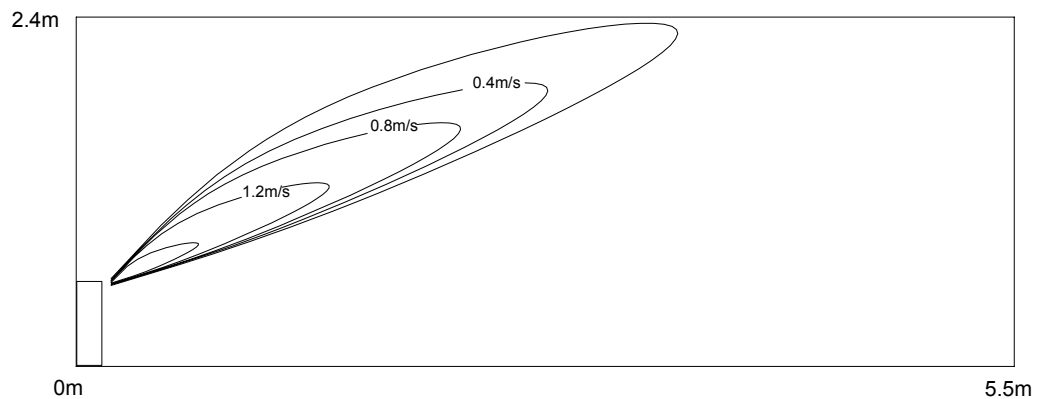
9.3 AF09/122XCERA:

a. Cooling / Air Velocity Distribution

Cooling

Blow angle:25

Air Velocity Distribution

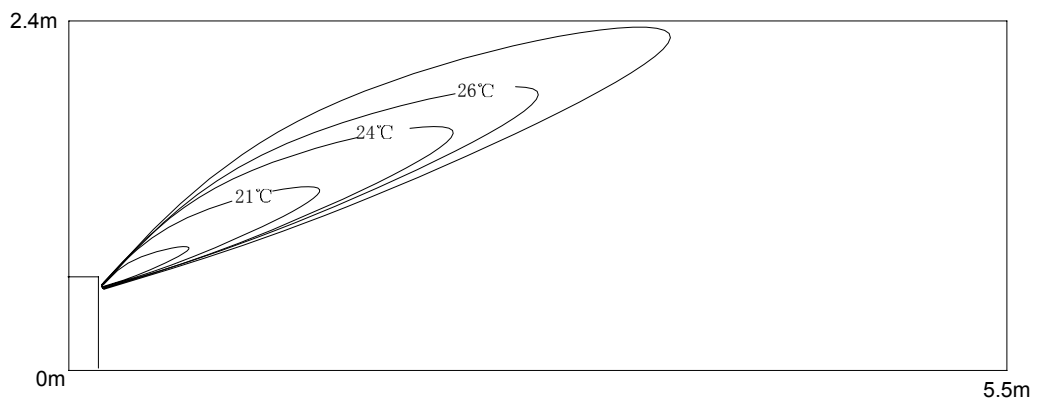


b. Cooling / Temperature Distribution

Cooling

Blow angle:25

Temperature Distribution

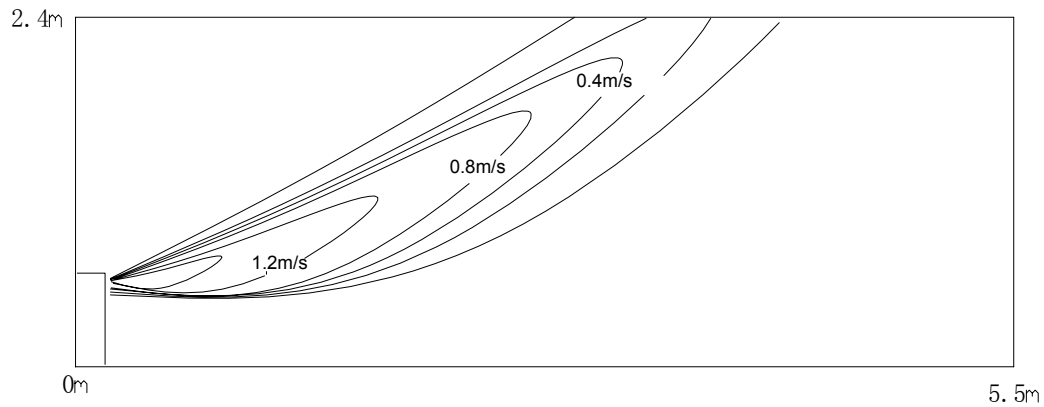


c. Heating / Air Velocity Distribution

Heating

Blow angle:5

Air velocity Distribution

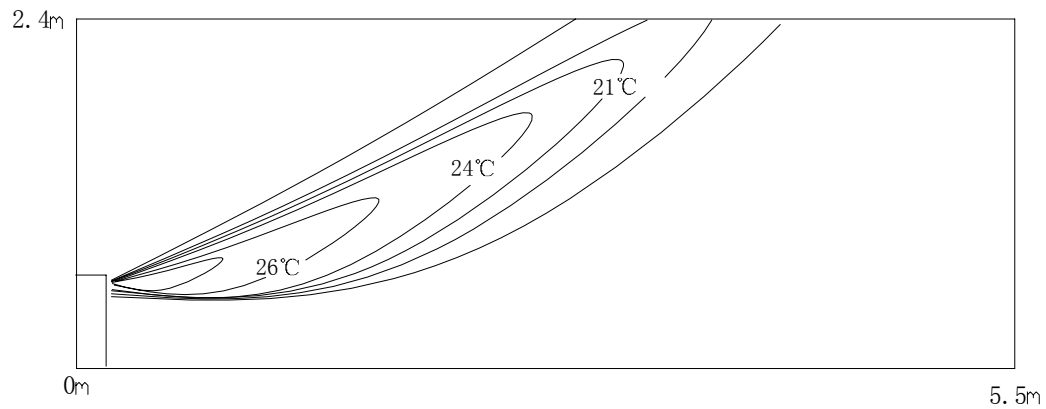


d. Heating / Temperature Distribution

Heating

Blow angle:5

Temperature Distribution



9.4 Wall mounted type:

Fig 1
top view
flow control panel horizontal
louver:center

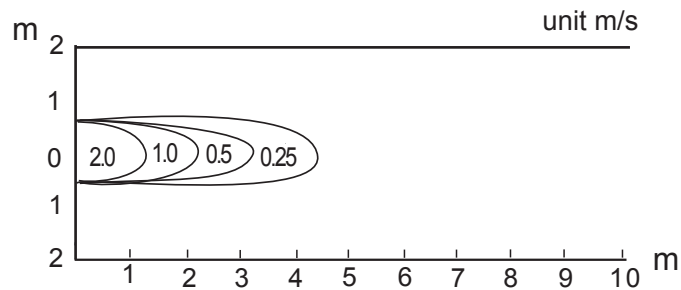


Fig 2
top view
flow control panel horizontal
louver:right and left

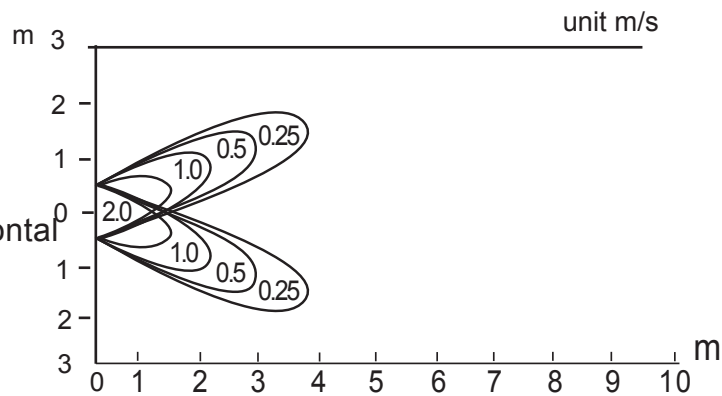


Fig 3
top view
flow control panel horizontal
louver:center

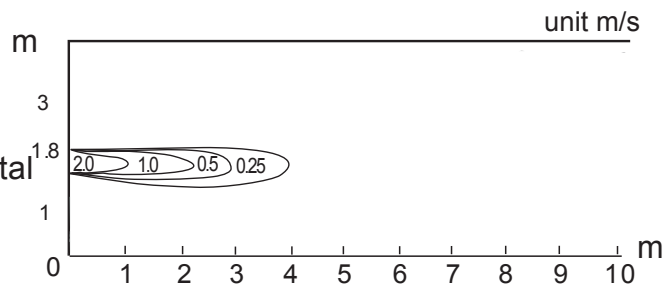
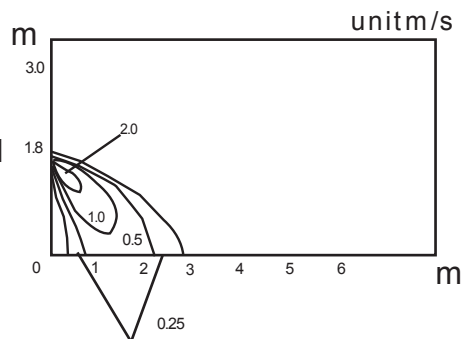


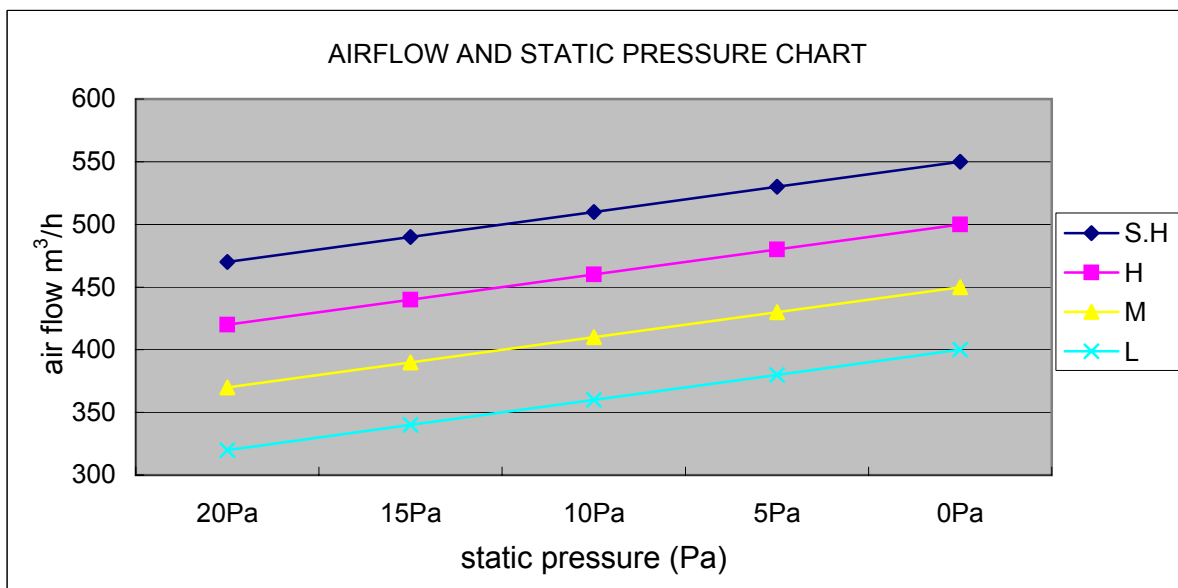
Fig 4
top view
flow control panel vertical
louver:center



Condition
Fan speed:high
Operation mode:fan
Voltage:230V,50Hz

10. Air flow and static pressure chart

AD092XLERA/AD122XLERA



AD142XLERA/AD182XLERA

